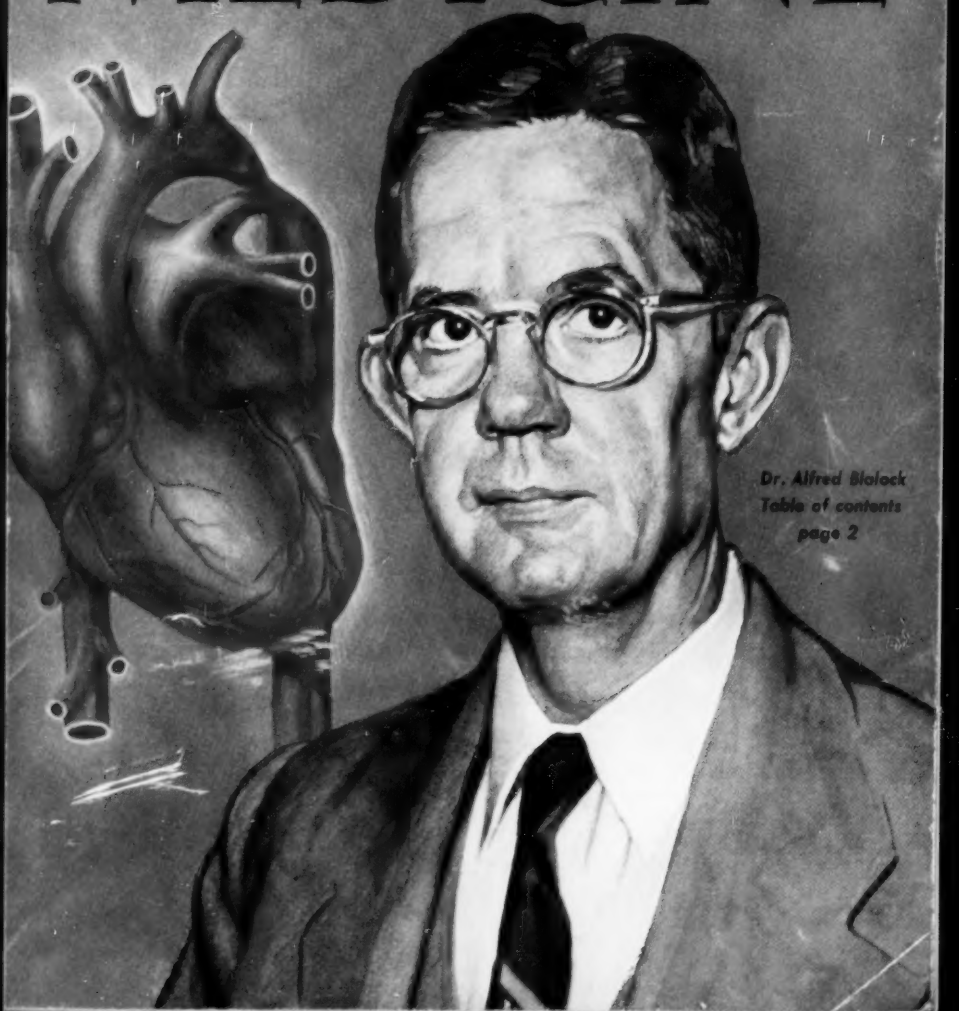
JULY 1, 1954

MODERN MEDICINE

The Journal of Diagnosis and Treatment



Dr. Alfred Blalock
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page 2

With Nitranitol *hypertensives can return to a more normal life...sooner*

Restricted activity and frequent laboratory checkups are often a concern to the patient. You can return many hypertensives to a more normal life with Nitranitol. *Because of its low toxicity,* blood pressure is safely lowered—side effects are the exception rather than the expected. *Nitranitol acts directly* on the arterioles to produce gradual vasodilation. *It maintains lowered pressures* for prolonged periods.

Why not start your hypertensive patients on Nitranitol—the universally prescribed drug for essential hypertension?

Because of its direct action on the arterioles, Nitranitol provides SAFE, GRADUAL, PROLONGED vasodilation, now in 6 dosage forms.

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Mannitol hexanitrate **32 mg.**

Vasodilation plus sedation:
Nitranitol with Phenobarbital
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Phenobarbital.....**16 mg.**

Protection in capillary fragility:
Nitranitol with Phenobarbital and Rutin*
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Nitranitol P. V.*
with Alkavervir.....**1 mg.**
(A special alkaloidal fraction of Veratrum viride, biologically standardized for hypotensive activity.)

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Nitranitol R. S.
...for direct vasodilation plus added hypotensive and sedative actions of RAUWOLFIA.
Mannitol hexanitrate **.32 mg.**
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**Each contains Nitranitol 32 mg. and Phenobarbital 16 mg.*

DOSAGE: In blood pressures over 200 systolic, 2 tablets 4 times daily. In other cases, 1 or 2 tablets every 4 to 6 hours.

NOTE: *Nitranitol is exceptionally stable, assuring potency, so important in hypertensive medication.*

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ALTEPOSE (1) curbs the appetite; (2) helps to correct glandular dysfunction; and (3) it also controls nervous tension.

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Reference: 1. J.A.M.A. 151:296, 1953.

MODERN CONTENTS

Volume 22
Number 13

DEPARTMENTS

MEDICINE

MODERN MEDICINE

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Address all correspondence to 84 South 10th Street, Minneapolis 3, Minn.

MEDICINE
for July 1, 1954

Walter C. Alvarez
Editor-in-Chief

●

THE MAN ON THE COVER is Dr. Alfred Blalock, Professor of Surgery and Director of the Department of Surgery at Johns Hopkins University School of Medicine. Dr. Blalock is the Surgeon-in-Chief at Johns Hopkins Hospital, consultant in surgery at the Veterans Administration Hospital, Perry Point, Md., and honorable associate consultant surgeon to Guy's Hospital, London. He is a past president of the American Association of Thoracic Surgeons and a member of many medical organizations, both American and foreign. He is recipient of the Charles Mickle Fellowship and the Passano award. Dr. Blalock is author of *Principles of Surgical Care; Shock and Other Problems* and is a frequent contributor to medical journals. He is coauthor of "Problems in Cardiovascular Surgery," which appears on page 99.

CONTINUED

Contents for July 1 1954

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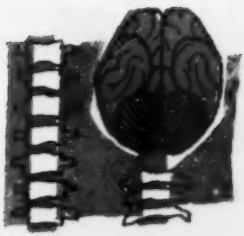

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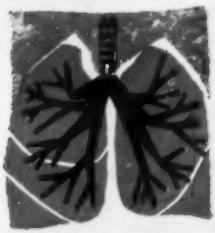
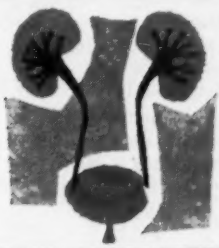
a highly soluble single sulfonamide



ELKOSIN is highly soluble and has a wide range of antibacterial activity. No alkalization is necessary.



ELKOSIN is indicated in sulfonamide-susceptible urinary infections, respiratory infections, meningococcal meningitis and streptococcal infections.

ELKOSIN is available in tablets, 0.5 Gm. (double-scored); bottles of 100, 500 and 1000. For pediatric use, Elkosin Syrup, a strawberry-flavored Suspension in Syrup, 0.25 Gm. per 4-ml. teaspoonful; pints.

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MODERN MEDICINE

Therapeutic Index

for July 1, 1954

THIS INDEX, prepared for your convenience, lists all advertised products in this issue. Specific information on each product will be found on the pages listed.

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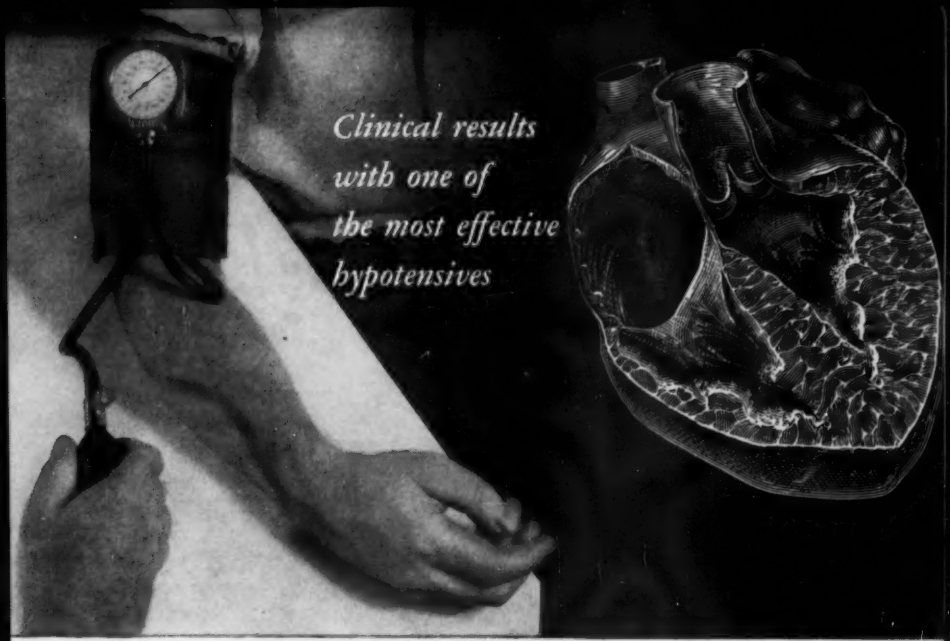

Improvement in 67 to 72% of patients with hypertensive heart disease[1]

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As blood pressure is reduced, and even without reduction, hypertension symptoms have regressed. Retinopathy may disappear; headache, cardiac failure and kidney function may improve.

Methium, a potent autonomic ganglionic blocking agent, reduces blood pressure by interrupting nerve impulses responsible for vasoconstriction. Because of its potency, careful use is required. Pretreatment patient-evaluation should be thorough. Special care is needed in impaired renal function, coronary disease and existing or threatened cerebral vascular accidents.

Bibliography:

1. Moyer, J. H.; Miller, S. I., and Ford, R. C.: J.A.M.A. *152*:1121 (July 18) 1953.
2. Moyer, J. H.; Snyder, H. B.; Johnson, I.; Mills, L. C., and Miller, S. I.: Am. J. M. Sc. *225*:379 (April) 1953.
3. Kuhn, P. H.: Angiology 4:195 (June) 1953.

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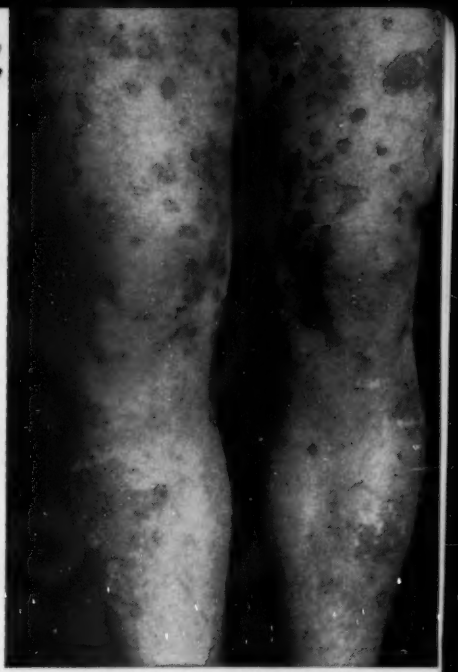
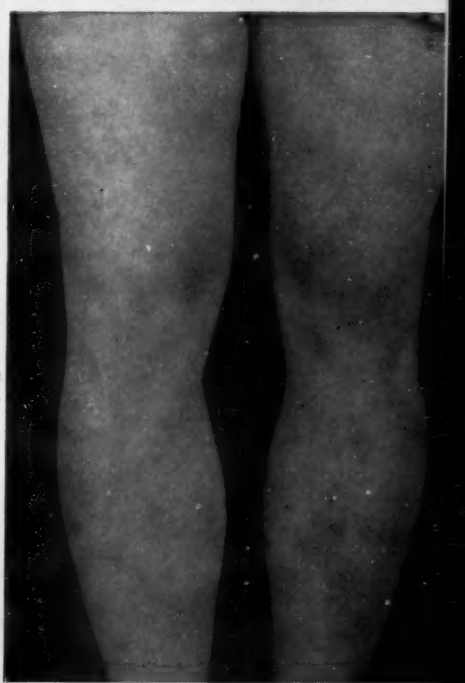


BEFORE USE OF RIASOL



AFTER USE OF RIASOL

RIASOL FOR PSORIASIS

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THE JOURNAL OF DIAGNOSIS AND TREATMENT

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'Co-Pyronil' usually produces:

RAPID RELIEF	frequently within fifteen to thirty minutes.
COMPLETE RELIEF	'Pyronil' is as much as twenty-five times as potent as other antihistaminic compounds.
PROLONGED RELIEF	b.i.d. dosage usually affords uninterrupted control.
FEW SIDE-EFFECTS	rarely causes sedation even on high dosage.

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'Pyronil' (Pyrrobutamine, Lilly), 15 mg.

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'Clopane Hydrochloride'

(Cyclopentamine Hydrochloride, Lilly), 12.5 mg.

DOSE: 1 or 2 pulvules every eight to twelve hours.

ALSO: SUSPENSION CO-PYRONIL

Each 5-cc. teaspoonful is equivalent to one-half the above adult formula.

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U.S.A.

LETTER FROM THE EDITORS

Dear Reader:

Intellectual curiosity is a prerequisite to progress. Thus it is that advances in science are not confined to favored geographic areas or to well-endowed institutions. The curious man may be found anywhere and may be of any race or creed.

The three score and ten physicians who are constantly tracking down the new developments in medicine for you are well aware of this. They study the unlikely as well as the likely. Their interest ranges around the world. It might not have occurred to you to go to Hammersmith for help in treating rheumatoid arthritis. But in the June 1 issue of *Modern Medicine* was a report from Hammersmith telling of significant suppression of symptoms when a certain regime was followed. On another page of the same issue you could read that a doctor from Ciudad Trujillo had helped develop an operative procedure for the relief of priapism. And if neither of these items interested you there were 79 other reports collected from 27 states and 4 foreign countries covering the entire range of medicine.

Not all the travel in search of information is vicarious. One of our editors contributing to the Short Reports from Abroad department has made three flying trips abroad since the first of the year. He is the envy of his colleagues. But they too are peripatetic on a less global scale and may be seen at almost any sizable medical gathering. Wherever our editors are, or whatever they are reading, they are always on the alert for information that will be interesting and helpful to you in your practice.

To avail yourself of the benefits from the reading and travel of these information experts costs you no more than a few minutes time comfortably seated in your favorite armchair with *Modern Medicine* in your hands.

The Editors

GENTLE · GENTLE · GENTLE · GENTLE · GENTLE · GENTLE · GENTLE

PROMPT · PROMPT · PROMPT · PROMPT · PROMPT · PROMPT · PROMPT

THOROUGH · THOROUGH · THOROUGH · THOROUGH · THOROUGH · THOROUGH · THOROUGH

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Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Unscientific Approach?

TO THE EDITORS: I am dismayed at some of the statements in the article on malignant skin lesions by Dr. Earl D. Osborne (*Modern Medicine*, Mar. 15, 1954, p. 120). The curettage and electrothermic destruction of malignant cutaneous lesions certainly does not appear to be a scientific approach to cancer of the skin.

In our tumor clinic, where we see advanced cases of carcinoma of the skin that have ulcerated and eaten into the orbit of the eye, the cranial sinuses, and the buccal cavity, the history is frequently obtained from the patient that the initial treatment was curettage and electrothermic destruction of primary lesions. It is difficult to see how the depth of malignancy can be determined by curettage.

A procedure for the therapy of malignant skin lesions which is accepted and well recognized by the tumor clinics is surgical excision by sharp scalpel well beyond the border of the lesion. The specimen is always sent for microscopic examination. The following question is asked of the pathologist: "Does the cancer extend to the line of excision?" Serial sections of the specimen are then cut showing the cut margins of the lesion.

Since a wide margin of safety is left around the lesion, the pathologist usually replies that the lesion has been completely excised. However, should the lesion be incompletely excised, a secondary wide excision of the first scar is made and the serial sections are repeated on the second specimen. Thus by microscopic examination we can be scientifically certain that we are well beyond the border of the cancer. A periodic follow-up examination is arranged for all patients with malignant lesions.

WILLIAM TREVOR, M.D.
New York City

Tender Nodules on Fingers

TO THE EDITORS: I have found that injecting a few milligrams of Hydrocortone acetate into the early tender nodules that appear beside the distal joints of the fingers will give prompt gratifying relief. If the finger is deformed, its appearance will not be improved, but the soreness and the stiffness will be relieved.

JAMES I. KNOTT, M.D.
San Diego

Exceptions are Rare

TO THE EDITORS: In the report on treatment of trigeminal neuralgia by Drs. David Cleveland and Edward Jern Kiefer *(Modern Medicine,* Apr. 15, 1954, p. 127) the statement is made that section of the root of the trigeminal nerve gives temporary relief of pain, but that pain and sensitivity return to the face in time. I doubt very much that Drs. Cleveland and Kiefer made such a statement.

There is nothing more certain in all of medicine than this: If a patient has trigeminal neuralgia and if the sensory root is wholly sectioned, pain relief will be permanent and sensation will never return to the face. Exceptions to this are very rare. Alcohol injection of peripheral branches of the trigeminal nerve is an altogether different matter and should not be spoken of as an equivalent to root section in any discussion of permanence of pain relief.

GEORGE EHNI, M.D.

Houston

Caution or Prejudice

TO THE EDITORS: We understand caution, but we do not comprehend prejudice. It seems to us that some, if not many, of the articles or abstracts in your excellent little bulletin are slanted unwittingly against radiotherapy. Being experienced in this field for over twenty-five years,

In Neuritis—

is temporary relief enough?

Now—

THE LONG PERIOD OF DISTURBING SYMPTOMS CAN BE REDUCED BY THE PROMPT USE OF—

PROTAMIDE

When you have a case of neuritis (intercostal, facial or sciatic) where the inflammation of nerve roots is not caused by mechanical pressure, let Protamide demonstrate how much faster lasting relief can be obtained than with usual therapy.

Usual dose: one ampul every day for five days or longer.

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(Sciatic • Intercostal • Facial)

A COMPARISON BETWEEN COMPARABLE GROUPS WITH AND WITHOUT PROTAMIDE THERAPY

CONTROL—156 Patients
The Course of the Disease Was 21 Days to 56 Days

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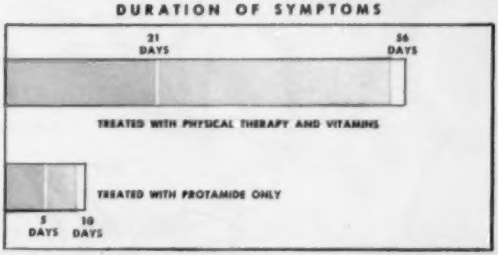

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"TREATMENT OF NEURITIS WITH PROTAMIDE"
Richard T. Smith, M.D.
Associate in Medicine and Chief of Arthritis at Jefferson Medical College and Hospital; Associate Physician and Chief of Arthritis, Pennsylvania Hospital; Director of Department of Rheumatology, Benjamin Franklin Clinic.

REPRINTS AVAILABLE

we are familiar with its limitations and hazards. We are equally familiar with its potential benefits.

In your March 1, 1954 issue (p. 95) your abstract of a paper on the thymus problem emphasizes "needless radiation therapy." We have treated many pediatricians' children for alleged symptomatic enlarged thymus with single small doses of x-ray with benefit. We have regarded it as psychotherapy, but it is hard to see how the psyche of a 6-month-old baby could be so sensitive. The facts are as stated, however.

On page 113, you have an abstract of an article by Dr. Edward L. Compere on giant-cell tumors of bone. Again, there is much talk about "great injury to all other tissues" and "excessive irradiation will cause extensive damage." Well, excessive medication with antibiotics, excessive surgery, even excessive psychotherapy will cause much damage. By all means state the facts, but state the facts on both sides of the case.

L. HENRY GARLAND, M.D.
San Francisco

Overlapping Terms

TO THE EDITORS: It seems to me that Dr. Edward P. Burch in his article, "Psychosomatic Eye Problems" *(Modern Medicine,* Apr. 1, 1954, p. 116), uses psychosomatic as a synonym for psychoneurotic.

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Psychosomatic indicates any connection or relation of psyche and soma—mind and body—independent of any pathology. It is a general term with broad meaning.

Psychoneurotic, however, refers to a pathologic condition, that is, a nervous state in which, in the main, an abnormal psyche produces an abnormal reaction known as neurosis or psychoneurosis; this always means a functional disorder without any irreversible anatomic changes. There is, of course, some overlapping in conditions in which these two terms can be used; but certain decisive differences should keep them widely apart.

WERNER BAB, M.D.

San Francisco

Coconut Water

TO THE EDITORS: I would like to make a comment regarding the basic science brief on infusion of coconut water, suggested by Dr. Ben Eiseman *(Modern Medicine,* Apr. 15, 1954, p. 206).

Theoretically the juice of a fresh, unripe coconut should be sterile. However, I can personally attest to the fact that the sterility of such a coconut cannot be assured except when proved by culture. On Guadalcanal in 1944 I encountered 2 such freshly picked coconuts in which the juice had fermented and was under pressure. The fermented juice was a most delicious drink—like coconut-flavored champagne.

If organisms which can ferment




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the juice of a coconut can gain access to the juice while the nut is still on the palm, how can one safely assume that the juice of any fresh coconut may not contain such organisms even though detectable fermentation has not begun?

JOHN H. SCHAEFER, M.D.
Los Angeles

Injections for Hydrocele

TO THE EDITORS: Since the development of technics involving the use of intraarticular injections of hydrocortisone, other reports have come out indicating its usefulness for ganglia. Since the mode of action is the neutralization of the inflammatory processes it was reasoned that such therapy might be useful for hydrocele.

A 2-month-old male infant had a gradually enlarging right hydrocele which was aspirated of 13 cc. of a serous fluid; 0.3 cc. of hydrocortisone, 25 mg. per cc., was injected into the hydrocele sac. Three days later the hydrocele was aspirated of 6 cc. of fluid, and 1 cc. of hydrocortisone was injected. That was nine days ago and the hydrocele sac is almost completely obliterated and contains probably not more than 0.5 to 1 cc. of fluid.

Admittedly this is too short a time to claim a cure but other physicians may be interested in this procedure and may be able to make controlled studies of the efficacy of such therapy. I feel that it would have been better to have used a full 25 mg. initially; however, proper dosages could be better worked out in a large pediatric center.

B. A. MICHAELIS, M.D.
Fredericktown, Mo.

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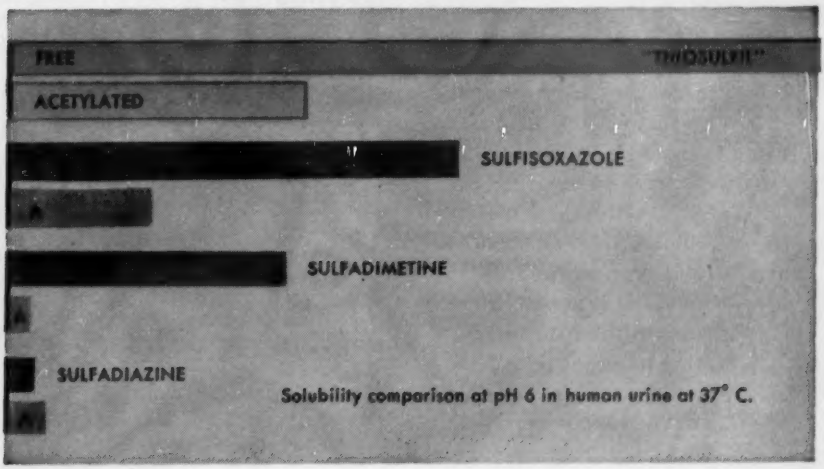

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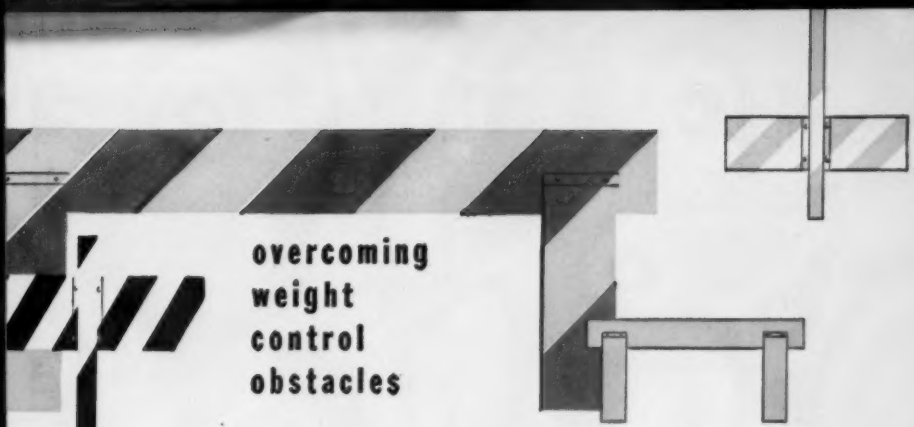

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Ascorbic Acid	100 mg.
Thiamine HCl	0.5 mg.
Riboflavin	1 mg.
Niacin	5 mg.

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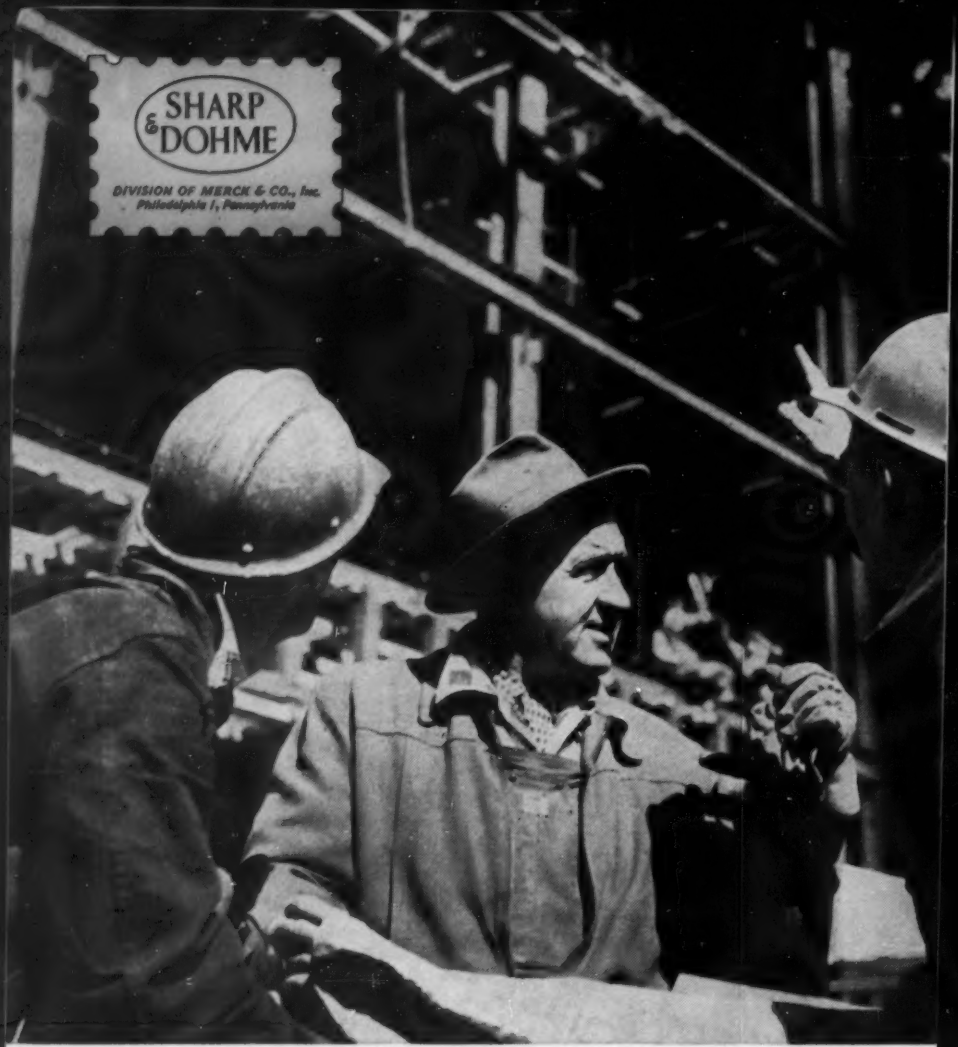

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With minimal risk of shock to your hypertensive patient, STOLIC FORTE brings down blood pressure smoothly and effectively. Its action begins promptly, then is gradual and sustained over a course of six hours.

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Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: In a personal injury suit, could the defendant defeat the plaintiff's claim for reimbursement for medical and hospital expenses because plaintiff carried health and accident insurance?

COURT'S ANSWER: No.

The New York Supreme Court, Queens County, cited decisions of the higher courts of the state to the effect that a wrongdoer cannot make use of the benefits resulting from good judgment and foresight of a plaintiff (128 N.Y. Supp. 2d 413).

PROBLEM: A mental patient in a private sanatorium hanged himself while unattended. His widow and children sued the sanatorium owner. [1] Was expert testimony essential to prove that due care was not taken to prevent suicide? [2] Was an award of $25,000 damages excessive, on the theory that the patient would have been a burden rather than an asset to the family?

COURT'S ANSWERS: No.

The South Carolina Supreme Court reasoned: [1] Since the sanatorium's doctor had stated when the patient was received that he had suicidal tendencies and would need constant attention, leaving the patient unattended for an hour showed failure to exercise due care.

2] The jury was not bound by the opinion of the head of the hospital that the patient was incurably insane, especially because cure was considered possible when the patient was admitted.

The opinion differs from decisions of other courts that hospitals are not liable for patients' suicides (80 S.E. 2d 348).

PROBLEM: A burglar, shot by city policemen, was taken to a private hospital for therapy. Though the hospital was to have been reimbursed out of funds belonging to the prisoner that were in the hands of the county district attorney, a court made other disposition of the money. Was the city or the county liable to the hospital?

COURT'S ANSWER: The city was liable.

The New York Supreme Court, Appellate Division, Fourth Department, reasoned:

The city was bound to provide medical attention and hospitalization for a burglar shot by city policemen. Also, the services were rendered at the request of city representatives.

There was no basis for holding the county liable to the hospital, even though the district attorney had said that the funds might be used to pay extra nurses (128 N.Y. Supp. 2d 433).

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Each capsule contains 0.25 Gm. mephenesin, plus 0.30 Gm. glutamic acid hydrochloride. The addition of glutamic acid hydrochloride provides enhanced clinical effectiveness for many patients otherwise unresponsive to mephenesin therapy (Hermann, I. F. & Smith, R. T.: Journal-Lancet 71:271, 1951).

PROBLEM: A doctor was sued for alleged negligent failure to suture tissues properly after a child's appendectomy. Was the mother properly permitted to testify that she could not see any indication of suturing and that there was no gauze or other drain in the wound when the child was brought home?

COURT'S ANSWER: Yes.

The Supreme Court of Alabama said that the fact that the mother was not a medical expert did not disqualify her to testify to what she saw, although it might affect the weight to be given to her testimony.

However, the court set aside judgment in favor of plaintiff and ordered a new trial on the ground that the trial judge erred in permitting the mother to testify that the nurse who attended the patient told her that sometimes it was not necessary to suture small children because their flesh was too tender. The doctor was not bound by what the nurse may have said in his absence (122 So. 349).

PROBLEM: If husband and wife live apart without a divorce under a separation agreement which made inadequate provision for her support, could a doctor force the husband to pay a bill for necessary medical expenses furnished to the wife?

COURT'S ANSWER: Yes.

So decided the New York Supreme Court, Appellate Term (29 N. Y. Supp. 2d 199).

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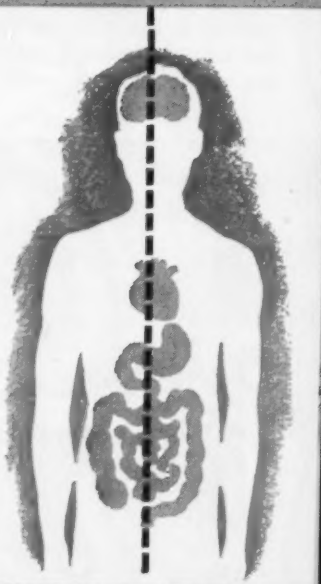

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infantile eczema

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1. Witten, V. H., et al.: A.M.A. Am. J. Dis. Child. 87:298, March, 1954.
2. Sulzberger, M. B., et al.: J.A.M.A. 151:468, Feb. 7, 1953.
3. Alexander, R. M., and Manheim, S. D.: J. Invest. Dermat. 21:223, Oct., 1953.
4. Sulzberger, M. B., et al.: J.A.M.A. 152:1456, Aug. 8, 1953.

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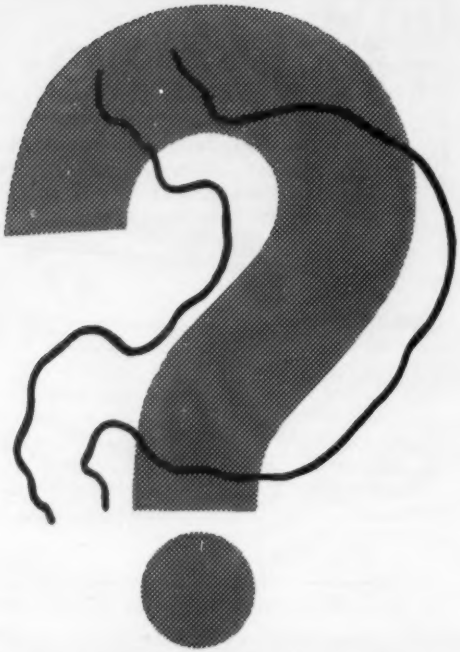

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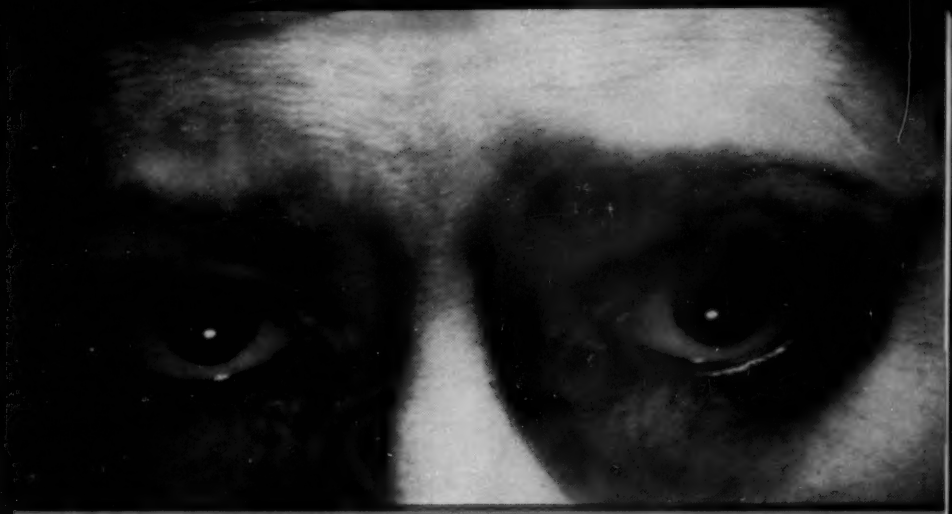

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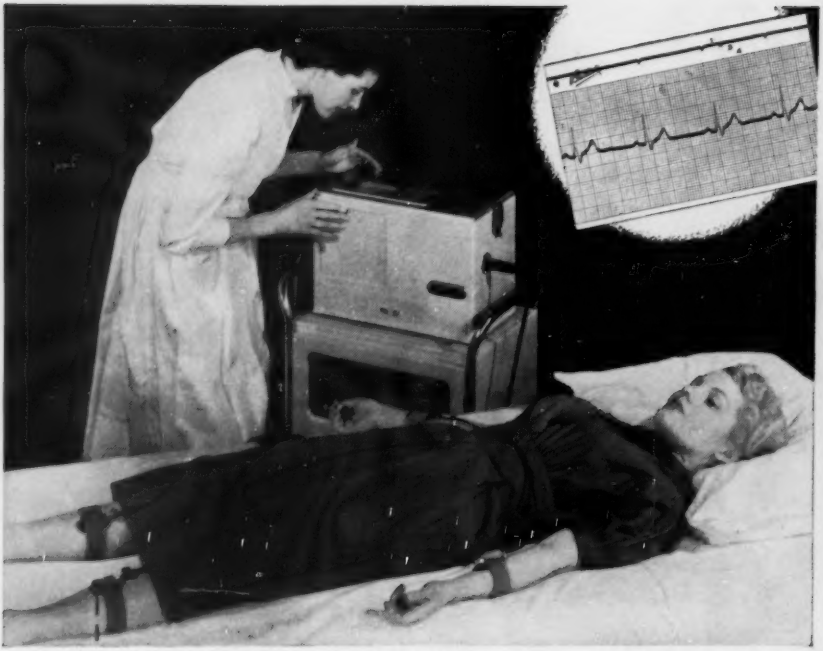

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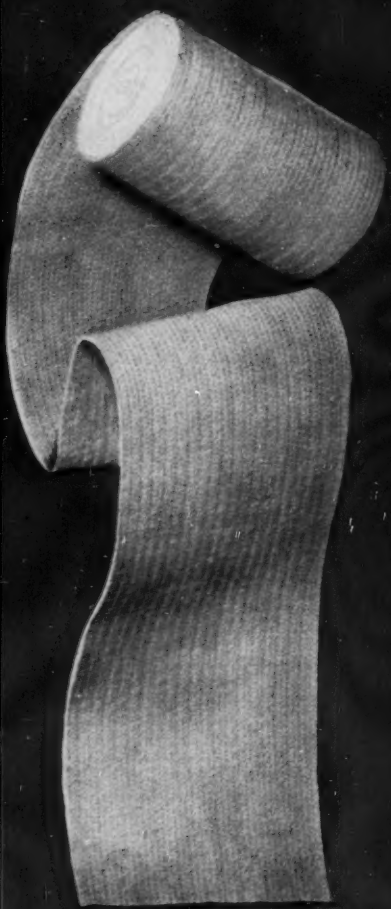

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Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: An 87-year-old woman has a continuous burning in the legs from knee to ankle. Bandaging helps but does not cure. What can be done?
M.D., Illinois

ANSWER: *By Consultant in Orthopedics.* Improvement by bandaging suggests a circulatory origin. The legs should be elevated at intervals during the day. Topical anesthetic ointments may help. The possibility of diabetes should not be overlooked.

QUESTION: Should varicose veins of the leg be treated by injection in the first two trimesters of pregnancy?
M.D., California

ANSWER: *By Consultant in Surgery.* Injection treatment during pregnancy is of no avail. The amount of pressure in the deep system at that time is increased and the incompetent perforating veins throughout the leg will dilate. Injection of one varicosity here or there is useless because other veins will subsequently dilate.

Treatment with stripping and injection is usually delayed until four months post partum.

Treatment of varicosities during pregnancy apparently is restricted to supportive therapy with either an elastic stocking or Ace bandage. The patient is encouraged to get as much exercise by walking as possible. In this way the pressure of the deep system will be relieved and dilatation of the communicating veins in the leg will be lessened.

The patient should also be advised to elevate the legs two or three times a day to drain the blood from the dilated varicosities and deep system.

If the patient has a straight tube-like vein from the groin directly down to the ankle, stripping this vein early during pregnancy will be beneficial. However, any adjacent varicosities are not treated at that time by injection or dissection.

QUESTION: A patient is semi-retired because of back pain from a spinal anesthesia injury. What treatment should be given?
M.D., California

ANSWER: *By Consultant in Orthopedics.* If due to true mechanical trauma, the pain should be relieved by usual orthopedic procedures such as immobilization with belt or brace. Pain arising from chronic arachnoiditis or other local toxic effect will probably improve less readily with conservative measures.

nature's chisel...

Living bone is a constant target for the chemical chisels, the osteoclasts, that erode osseous tissues and leave the pitmarks of "lacunar absorption."[1] This continuous process of wear and tear requires the formation and deposition of new bone throughout every individual's life.

For everyone, both young and old, it is necessary to keep up a dietary supply of vital minerals, particularly calcium for the normal growth and replacement of bone chiseled away by such osteoclastic erosion. But especially for the older person with osteoporosis, for those with defective skeletal mineralization or with delayed union of fracture, a therapeutic diet plays an important role in osseous regeneration.[2]

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[1]Swenson, P. C., and Jeffery, R. B. : G. P. 7:34 [Feb.] 1953. [2]Stieglitz, E. J. : Geriatric Medicine, ed. 2, Philadelphia, W. B. Saunders Company, 1949, p. 697.

Doctor to Doctor

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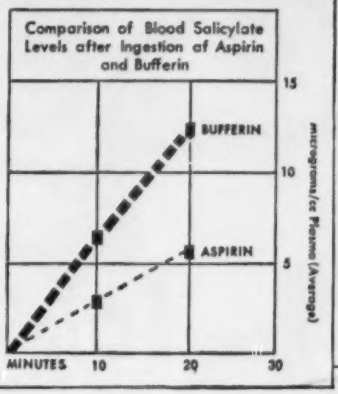

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1. Effect of Buffering Agents on Absorption of Acetylsalicylic Acid, J. Am. Pharm. Assoc., Sc. Ed. 39:21, Jan. 1950

2. Gastric Tolerance for Aspirin and Buffered Aspirin, Ind. Med. 20:480, Oct. 1951

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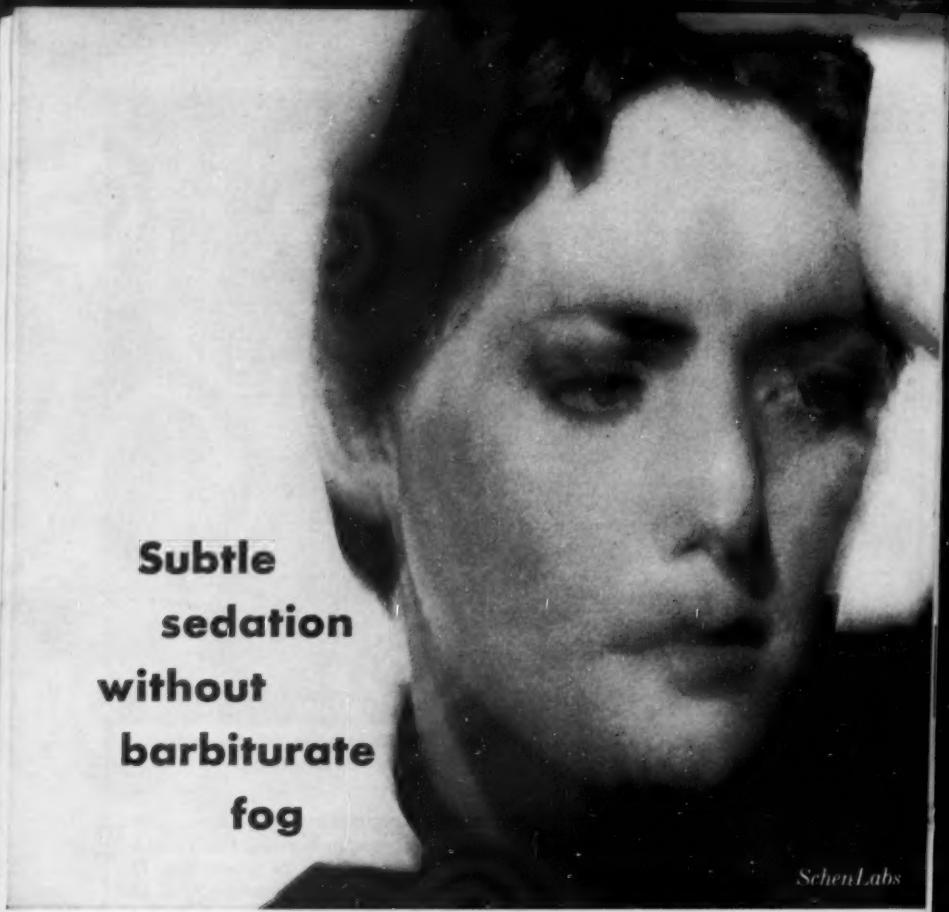

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1. Tebrock, H. E.: M. Times 79:760, 1951.

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1. Pollock, B. E., and Pruitt, F. W.: Am. J. M. Sc. 226:172, 1953.

Washington LETTER

Military Care for Dependents Up for Revision

FAIRLY late in the session, Congress had tossed in its lap a piece of legislation that physicians and hospital people are watching with at least interest, if not concern. It is the Defense Department's proposal to end the present unfair and chaotic system for giving dependents medical care, and to substitute a broader, more uniform, and more expensive plan.

Under present regulations—based only on scraps of laws—care of wives and children is poorly defined and the services cannot agree even on what relationship is necessary to constitute legal dependency. The Army has its own standards, the Navy its own, and the Air Force still another set. But more aggravating for the people concerned is the fact that no medical care is available at all unless the patients live near a military medical installation or don't mind traveling to reach one.

"I brought you something to read, dear."

The Defense Department, after long study, has come up with ideas of how to straighten out the program. The main recommendations are:

- Except overseas and at remote spots in the United States, care would be limited to diagnosis, acute medical and surgical conditions, contagious diseases, immunization, and maternity and infant care. Dental care would be excluded.
- Eligibility would not extend to relatives beyond parents-in-law, and they would have to be dependent for most of their support on the military member involved.
- The military medical installations would care for all the dependents they could handle; the overflow and those living too far from military posts would be cared for by civilian physicians and in civilian hospitals, with the government paying most of the costs.
- The Secretary of Defense would decide what charges, if any, to make against dependents for care received from uniformed physicians and in

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No. 1—Dexedrine* Sulfate
(dextro-amphetamine sulfate, S.K.F.), 10 mg., and amobarbital, 1 gr.

No. 2—'Dexedrine' Sulfate
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for the continuous and sustained mood-ameliorating effect of 'Dexamyl' over a prolonged period of time

Both dosage strengths are designed to have the same duration of effect. The difference is in the intensity of effect. To determine optimal dosage for an individual, begin with one 'Dexamyl' *Spansule* (No. 2) capsule daily —taken on arising or at breakfast. Response to this dosage will be the best guide to subsequent administration.

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(see other side)

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amphetamine sulfate, S.K.F.
for day-long relief of psychogenic tiredness

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for day-long control of appetite in weight reduction

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*Trademark

(see other side)

service hospitals; if the dependent was treated privately, he or she would pay the first $10 cost of every illness, plus not more than 10% of the total cost.

The number of dependents is substantial—about 3,000,000. Possibly half of them now get some medical care from the government—but only from government facilities. The military services argue, and almost no one seriously disagrees, that all should receive the benefits and that the benefits should be as uniform as possible.

The basic controversy is whether uniformed doctors should provide the care in military hospitals, or whether civilian dependents ought to obtain their medical care the way the rest of the population does. Many professional people point out that if the bill is enacted the way it was written in the Defense Department, the military services will simply expand their medical departments until they can care for almost all dependents. Where would the services, already short of physicians, get the thousands more needed to do the extra work? One way would be through military medical scholarships, legislation for which already has been prepared by the Defense Department.

The American Medical Association has long been observing the development of the Defense Department's proposal. The Association's planners have conferred with Defense Department people to try for a compromise. Some differences were smoothed out, but the basic question remains: Are the bulk of the dependents going to be cared for by civilians or by military personnel?

The AMA's counterproposal goes

directly to the heart of the question. It states:

- Dependents would go to civilian physicians and civilian hospitals in every place where such civilian care is available and adequate.
- The government would carry most of the cost, through either direct payments, prepay insurance, or increased pay to the servicemen.
- When civilian medical care is not available or is inadequate, the military medical departments would be under obligation to care for dependents.

The issue is so clearly drawn that Congress will probably have to go along either with the Defense Department or with the AMA and other professional groups who support AMA in this situation. There is no room for more compromise.

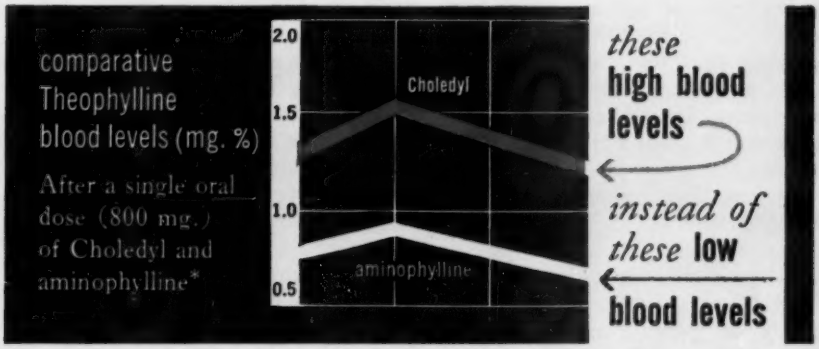
Only the medical establishment of the Veterans Administration exceeds that of the military services. There are 172 military hospitals in the continental United States, with almost 70,000 operating beds. There are also more than 100 infirmaries, some of which approach the status of hospitals. If the Defense Department's views prevail in Congress, a new hospital construction program would be inevitable.

With so little time left this session, there is no certainty that Congress will be able to finish legislation as complicated as this. But there is no question now that something will be done before many more sessions. Everyone is agreed that most dependents are not getting the medical care they have a right to expect.

WOLVERTON BILLS

Rep. Charles Wolverton of the House Interstate and Foreign Com-

When you see an indication for
ORAL AMINOPHYLLINE THERAPY
you can now attain



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Choledyl is the *new* xanthine derivative—five times more soluble than aminophylline, and far better absorbed. Choledyl not only provides higher blood levels, but minimizes the common gastrointestinal irritations associated with ordinary aminophylline.

Oral Choledyl is designed for continuous, intensive theophylline medication free from the drawbacks of poorly soluble, irritating aminophylline, orally; or the scattered emergency use of aminophylline, intravenously. Choledyl is well tolerated on long administration. Unlike aminophylline, Choledyl showed no loss of efficacy even during prolonged treatment.

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SUPPLIED: 100 mg. and 200 mg. tablets, bottles of 100 and 500.

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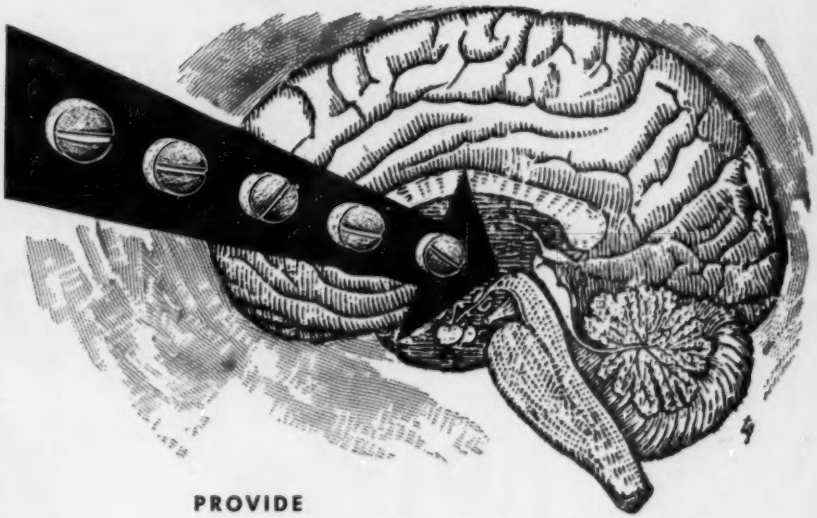
merce Committee continues his legislative maneuvers designed to get action this session on one of his own bills and on another bill that the Eisenhower administration has adopted. The Wolverton bill is a proposal that the federal government guarantee private loans for the construction of health facilities, somewhat the way FHA guarantees housing loans.

As originally written, Mr. Wolverton's bill would for practical purposes limit benefits to physicians practicing as a group, and those whose practice is made up mostly of prepaid insurance patients. When Mr. Wolverton realized that this limitation was holding up his bill, he agreed to drop the restriction. That helped its advancement to a degree, but not enough. The AMA, for example, informed Mr. Wolverton that its basic objection remained: The bill is not needed. More and more communities are able to build clinics and hospitals to attract physicians, and more physicians are able to finance construction on their own, for both group and individual practice.

Mr. Wolverton then had his staff attempt to combine the mortgage guarantee bill, which retained some labor support but was not backed by the Eisenhower administration, with the reinsurance bill, which was supported by the administration but by very few other people.

(Continued on page 70)

SECODRIN TABLETS



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Symptomatic relief from Psychosomatic disturbances

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Anxiety, abnormal dread or fear, discouragement, gloom, depression, nervousness

ALLAY
Sensation of hunger, thereby lessening tendency to overeating

CREATE
Sense of well-being without untoward after-effects

Each Secodrin tablet contains: secobarbital 30 mg.
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3:15—Disintegration Test begins in actual stomach fluids (pH 2.7). Beaker at left contains ordinary enteric-coated erythromycin. At right is new *FILMTAB*® ERYTHROCIN Stearate (Erythromycin Stearate, Abbott).

Earlier Blood Levels *from*

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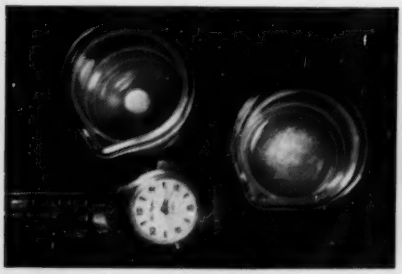
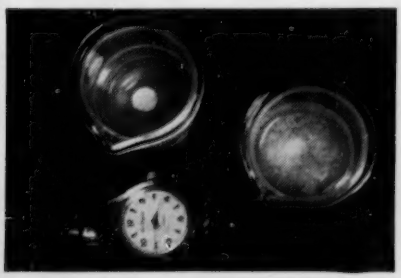
- DISINTEGRATES FASTER THAN ENTERIC COATING
- HIGH BLOOD CONCENTRATIONS WITHIN 2 HOURS



3:20—Five minutes later, *Filmtab** coating has already started to disintegrate. The tissue-thin film actually begins to dissolve within 30 seconds after your patient swallows tablet.

3:30—*Filmtab** is now completely dissolved. At this stage, ERYTHROCIN is ready to be absorbed, and ready to destroy sensitive cocci—even those resistant to other antibiotics.



3:45—Now the *Filmtab** tablet mushrooms out with all of the drug available for absorption. Note that enteric-coated tablet is still intact. Tests show that the new Stearate form definitely protects ERYTHROCIN.

4:00—Because of *Filmtab** (marketed only by Abbott) the drug is released faster, absorbed sooner. In the body, effective ERYTHROCIN blood levels appear *in less than 2 hours* (instead of 4-6 as before). Abbott

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AER156

Our Office Nurse

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Las Vegas, N. M.

Mail your caption to

The Cartoon Editor
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Inositol ..... 200 mg.

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To prevent and correct the capillary fault frequently encountered.

Vitamin A ..... 1000 units
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Riboflavin ..... 1 mg.
Niacinamide ..... 4 mg.
Pyridoxine hydrochloride ..... 0.25 mg.
Calcium pantothenate ..... 1 mg.

To compensate for shortages in fat-restricted diets.

Indicated particularly in cirrhosis, atherosclerosis, coronary artery disease, diabetes. Usual dosage 2 capsules t. i. d.

Supplied in bottles of 100.

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Dosage: 200 mg. daily, adjusted according to response. 50 and 100 mg. tablets, bottles of 100 and 1000.

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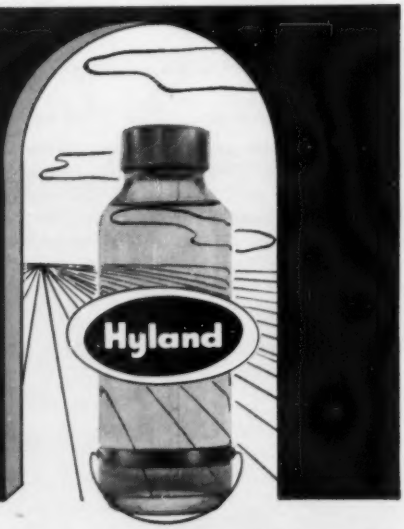

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ONE Ointment

FOR ALL usual topical bacterial infections

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Polymyxin B — Bacitracin — Neomycin

ANTIBIOTIC OINTMENT

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Spirochetes

Neisseria

Mycobacteria

Escherichia sp.

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(Polymyxin B) Sulfate*
for *Ps. aeruginosa* and other gram-negative bacilli,

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for *Streptococci, Staphylococci* and other gram-positive organisms,

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in a special petrolatum base.

Tubes of ½ oz. with applicator tip.

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R. A. SUTTER, M. D.

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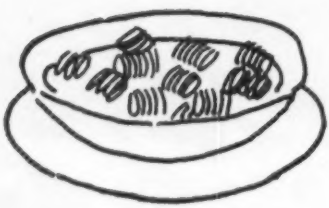
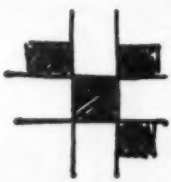
WHEAT CHEX
... it's whole wheat

Delicious!
Like it myself





For HARD, DRY STOOLS OF CONSTIPATED BABIES

Borcherdt

MALT SOUP *Extract**

A gentle laxative modifier of milk. One or two tablespoonfuls in the day's formula—or in water for breast fed babies—produce a marked change in the stool.

SAVES DOCTOR'S TIME, TOO!

Fewer phone calls from anxious mothers. Malt Soup Extract is merely added to the formula. Prompt results. Easy for mother to prepare and administer. Does not upset the baby.

*Specially processed non-diastatic malt extract neutralized with potassium carbonate. In 8 oz. and 16 oz. bottles.

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A New Dietary Management for

CONSTIPATED ELDERLY

A bowel content modifier that softens dry, hard stools by dietary means without side effects.[1] Acts by promoting an abundant fermentative bacteria in the colon, thus producing soft, easily evacuated stools. Retards growth of putrefactive organisms. By maintaining a favorable intestinal flora, Malt Soup Extract provides *corrective therapy for the colon, too!*

DOSE: 2 tablespoonfuls b.i.d. until stools are soft (may take several days), then 1 or 2 Tbs. at bedtime.

*Specially processed malt extract neutralized with potassium carbonate. In 8 oz. and 16 oz. bottles.

1. Cass, L. J. and Frederik, W. S.: Malt Soup Extract as a Bowel Content Modifier in Geriatric Constipation. Journal-Lancet, 73:414 (Oct.) 1953.

Send for Sample

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It appeared that the merger would consist merely in printing up the two proposals into one bill. To the union Mr. Wolverton's bill would bring the support of labor and of a large section of the prepaid health insurance field. The reinsurance bill would have the Eisenhower influence in back of it, but nongovernment support would be limited to the American Hospital Association and Blue Cross. The two-way bill would continue to arouse the opposition of AMA and most other professional groups; the insurance industry; and business groups, such as the U. S. Chamber of Commerce.

Despite Mr. Wolverton's efforts, prospects for enactment of any part of his proposal were dim.

Washington Notes

¶ For the first time, the Eisenhower administration has officially retreated on health budgets. The White House has approved a number of boosts over Budget Bureau recommendations, including $25 million more for the regular Hill-Burton hospital construction program.

¶ Scheduled for enactment, despite some delay in the Senate, is an administration bill to expand the Hill-Burton program for the benefit of clinics, health centers, and nursing homes, which now are not eligible for the grants. The bill will call for $65 million a year, in addition to the regular Hill-Burton appropriation of around $60 million.

¶ At this writing probably the first important medical bill to pass will be an amendment to the Doctor Draft Act; this would allow the military services to keep on duty, only as enlisted men, any persons called up under the act whose loyalty is questioned.

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Ciba Pharmaceutical Products, Inc.
Summit, N. J.

*Sulzberger, Marion B., and Wolf, J.: Dermatologic Therapy in General Practice, ed. 3, Chicago, Year Book Publishers, Inc., 1948, p. 107.

CIBA

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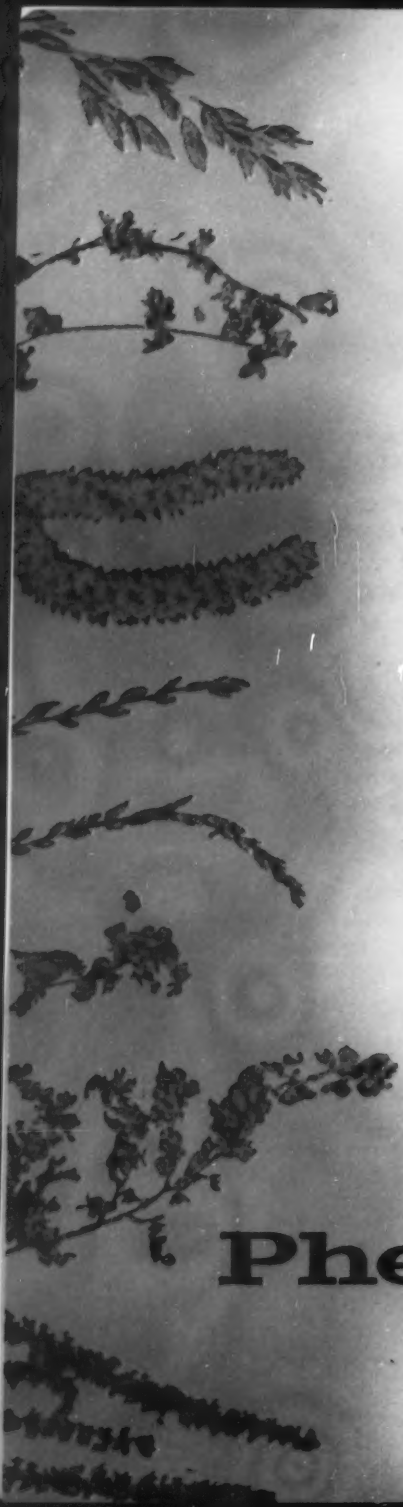

RESULTS FAR SUPERIOR IN HAY FEVER

In more than 92% of 102 patients in one study, ". . . results obtained with PHENERGAN in symptomatic relief of pollen hay fever were far superior to those obtained with any other antihistaminic agent."[1] Side effects were negligible; single, individualized doses were effective for periods of from four to 24 hours.[1]

The allergic patient, exhausted by the sneezing, rhinitis and lacrimation of hay fever, can be restored to *comfortable* living with PHENERGAN.

1. Silbert, N. E.: Ann. Allergy *10*:328-334 (May-June) 1952

Supplied:

Tablets—12.5 mg. per tablet; bottles of 100
Syrup—6.25 mg. per teaspoonful (5 cc.); bottles of 1 pint

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MODERN MEDICINE
THE JOURNAL OF DIAGNOSIS AND TREATMENT

THE EDITOR'S PAGE

by WALTER C. ALVAREZ, *Editor-in-Chief*

Psychosis Seldom Produces Psychosomatic Disorders

Thoughtful physicians sometimes wonder why the tremendous mental storm that goes with some types of psychosis seldom produces a psychosomatic disorder. Certainly, it would seem that many mentally unbalanced persons are sufficiently torn by powerful emotions. For instance, a woman with an agitated depression will walk the floor day and night in an agony of nervous tension and yet she will not complain of mucous colic, neurodermatosis, peptic ulcer, migraine, or asthma. In fact, if she used to have one or more of these troubles, she may promptly lose them the day she becomes psychotic.

This question was discussed some time ago by Dr. Henry W. Brosin (*Ann. Int. Med.* 37:745-750, 1952). He said that only 2.1% of 965 psychotic patients in one psychopathic hospital and 3.4% of 576 in a similar hospital had psychosomatic disorders. Such complaints can be found in perhaps a third of the patients who go to a consultant in internal medicine.

At the Western Psychiatric Institute, only 0.5% of patients were thought to have peptic ulcers. Perhaps 1 in 5 physicians has one. In the Institute, bronchial asthma was seen in only 0.8% of the patients, and diabetes in 0.4%. Rheumatoid arthritis appeared in only 0.4%.

Perhaps the situation is similar to that in the Nazi concentration camps where the prisoners' tremendous concern over the problems of getting enough food and staying alive caused the neurotic ones to forget their old fears and discomforts. It was like Noah during the Flood, deciding never again to complain about a drizzle.

Go Easy on the Unusual Single Case

One of my colleagues, a wise and shrewd physician, used to say, "Beware of the physician who is always talking of one rare case and assuming that he has found a mate to it."

An old school friend of mine once had a patient whose arthritis disappeared magically after the removal of a mouthful of foul snags of teeth. Thrilled by this miracle, my friend, for the rest of his days demanded that every person who entered his office, with whatever disease, sacrifice most or all of his or her teeth. Only rarely was a patient much helped by the extractions, but that did not discourage my friend; he was sure that soon again he would work a wonderful cure.

Similarly, I have known physicians who once greatly helped a patient by diagnosing brucellosis, hypoglycemia, amebiasis, or allergy to cold. Ever since that time, a considerable number of the doctors' patients seem to have had these pet diseases.

The other day I read a statement by a prominent physician to the effect that in nearly all cases of chronic diarrhea the cause is achlorhydria. He said this because he once saw a person miraculously cured by being given a daily dose of dilute hydrochloric acid. I, too, had such an experience back about 1928. The patient was a woman whose cure with acid medication was immediate and startling. But during the years that followed I kept looking for such cases and found very few.

Which reminds me of one of the most useful lessons I ever learned. One morning when, as an intern, I made a fancy diagnosis of blastomycosis, my wise old professor said, "No, when in doubt stick to the common diseases like cancer and tuberculosis, and then generally you'll be right." At autopsy, a week later, my patient was found to have generalized tuberculosis!

Substance That Produces Exophthalmos

Recently B. M. Doryns and Lois A. Wilson reported that they had separated two substances in the pituitary secretion—one that will produce hyperplasia in the thyroid gland and one that will produce exophthalmos.

A few micrograms of the second substance produce exophthalmos in the Atlantic minnow within three to six hours. Some patients with severe exophthalmos have now been shown to have this substance in their blood sera.

Treatment for Renal Insufficiency

HERBERT CHASIS, M.D.
New York University, New York City

*Conservative measures should be used to treat patients with acute or chronic renal insufficiency.**

LIFE is compatible with weeks of anuria and methods are available to control fluid, caloric, and electrolyte needs during total impairment of renal function.

ACUTE RENAL FAILURE

Conservative therapy—Treatment of severe oliguria or anuria is the chief problem with acute renal failure. The daily water requirement is determined by adding the amount of fluid lost as urine, excessive sweat, diarrhea, or vomiting to a basic figure of 500 cc. Other factors affecting water balance, such as activity, fever, metabolic rate, and the environmental temperature, must also be considered. Only enough water to cover insensible water loss should be given. Daily weighing will detect gain in weight indicative of excessive fluid administration.

Glucose is given to supply caloric needs and prevent excessive breakdown of body protein and fat. The calories obtained from 100 gm. of glucose per day are supplemented with additional fat. Peanut oil, prepared fat emulsions (Lipomul-oral or Ediol), or a sauce made by saturating butter with granulated sugar and flavored with brandy, whiskey, or vanilla, may be used. If anuria lasts more than four or five days, fat and carbohydrates through a nasointestinal tube are usually necessary.

Electrolytes should not be given unless indicated by clinical manifestations, low plasma levels, or known losses. If potassium is not administered in food or fluid, if caloric feeding is adequate, and if blood *p*H is controlled with bicarbonates, hyperkalemia will not occur. If accumulation is abnormal, cation exchange resins may be used but must be carefully supervised to prevent increased sodium concentration.

Should acidosis occur, about 10 to 20 gm. of sodium bicarbonate is taken orally in the first twenty-four hours.

Care is necessary during the recovery phase to avoid excessive electrolyte loss. Patients should be watched closely for at least two to three weeks after diuresis starts.

Other therapy—Persistent severe oliguria or anuria may also be treated by attempts to prevent or reverse the mechanism responsible for the anuria. *Blood transfusions* should be used for extensive burns, blood loss, trauma, or shock. *Spinal anesthesia* and *renal decapsulation*

*Treatment of acute and chronic renal insufficiency. Connecticut M. J. 18:331-339, 1954.

are of questionable value. *Diuretics* are ineffectual.

The *artificial kidney* is not recommended because spontaneous diuresis with recovery can occur after more than two weeks of anuria. In most cases, the diuresis comes before the end of the second week, and a patient can live six weeks with anuria. The artificial kidney entails uncontrollable dangers. For the same reasons, *peritoneal lavage* and *replacement transfusions* are not recommended.

CHRONIC RENAL FAILURE

The aim of therapy with chronic renal failure is symptomatic relief. The asymptomatic patient can lead a fairly normal life.

Electrolyte disturbances should be carefully corrected. Protein intake need not be limited. About 60 gm. daily is recommended unless the patient has hyperkalemia or another condition necessitating limitation of proteins. Direct therapy to reduce elevated blood urea concentration is not warranted.

Adequate fluid intake is important since the patient with uremia is frequently dehydrated.

Sodium bicarbonate is given to correct acidosis. Sodium is not limited unless congestive heart failure threatens. When hyponatremia occurs, sodium is administered to prevent exaggeration of the depression of glomerular filtration.

To combat hypocalcemia, milk intake is increased and calcium salts given. Aluminum hydroxide will decrease phosphate absorption from the gastrointestinal tract. Potassium intake should be reduced when this cation is retained excessively. Resins exaggerate the acidotic trend and, therefore, should not be used for edema with chronic renal insufficiency. Transfusions are employed when anemia becomes severe.

ACTH and cortisone induce more remissions of well-established renal disease than does nitrogen mustard. The hormones should be used for patients with glomerulonephritis except in the terminal hypertensive and uremic phase.

Hepatitis of Malarial Origin

ARTHUR E. MC MAHON, JR., M.D., JAMES E. KELSEY, M.D., AND DONALD E. DERAUF, M.D., VETERANS ADMINISTRATION HOSPITAL, DES MOINES, emphasize that with drugs now capable of eradicating the malaria parasite, treatment of malarial hepatitis assumes greater importance, since the liver disorder may be more incapacitating than the parasitemia.

Malaria is found in 6.6% of returning Korean war veterans. The mode of liver damage is unknown. Fever, poor nutrition, anemia, anoxia, malaria toxin, and parasites in hepatic tissue may be contributory factors. The changes in liver histology are temporary, and liver function improves with antimalarial therapy.

Hepatitis of malarial origin. Arch. Int. Med. 93:379-386, 1954.

Current Therapy for Hypertension

S. W. HOOBLER, M.D.
University of Michigan, Ann Arbor

*Treatment of high blood pressure is of 2 types, one with moderate sustained action and the other with more powerful intermittent effect.**

WHEN hypertension is not severe, prolonged reduction may be induced by surgical sympathectomy, dietary sodium restriction, or use of Rauvolfia alkaloids.

Severe hypertension requires active transient depressors, which produce frequent untoward reactions. The principal drugs are hydralazine hydrochloride, veratrum alkaloids, particularly protoveratrine A and B maleates, and ganglionic block-

TABLE 1. RAUVOLFIA SERPENTINA AND RESERPINE

Drug and oral dose	*Side effects*
Rauvolfia serpentina (Raudixin) 50 to 100 mg. two to three times daily	Useful—decrease in pulse rate and anxiety, increase in appetite, weight, and bowel movements
Reserpine (Serpasil) 0.25 to 0.5 mg. two to three times daily	Unpleasant—fatigue, nasal stuffiness
Mode of action	Serious—none
? hypothalamic with central sympathetic inhibition, parasympathetic stimulation	*Precautions*
Treatment objective	None
Moderate sustained blood pressure reduction	*General contraindications*
	Fatigue, obesity

TABLE 2. HYDRALAZINE HYDROCHLORIDE

Drug and oral dose	*Side effects (continued)*
Hydralazine hydrochloride (Apresoline) 10 to 150 mg. three to four times daily	Unpleasant—headache, gastrointestinal symptoms, tachycardia, palpitation
Mode of action	Serious—drug fever, arthritis resembling lupus erythematosus
Direct vasodilator	*Precautions*
Treatment objective	Should not be used for drug-sensitive patients
Moderate diurnal blood pressure reduction in some cases	*General contraindications*
Side effects	Angina, ? congestive heart failure
Useful—circulatory stimulation, increased renal blood flow	

*The modern treatment of hypertension. Univ. Michigan M. Bull. 20:1-21, 1954.

TABLE 3. PROTOVERATRINE A AND B MALEATES

Drug and oral dose

Protoveratrine A and B maleates (Provell) 0.75 to 1.5 mg. after breakfast and 0.25 mg. two hours later; dosage may be repeated after supper if tolerated.

Mode of action

Afferent stimulation of vasomotor centers with ? sympathetic inhibition and parasympathetic stimulation

Treatment objective

Recumbent or standing blood pressure reduction four to six hours daily

Side effects

Useful—decreased pulse and increased cardiac efficiency

Unpleasant—nausea, vomiting, extreme hypotension

Serious—heart block

Precautions

Omit during acute digitalization

Intravenous atropine sulfate for heart block

General contraindications

Cerebral arteriosclerosis

ing agents, including hexamethonium chloride and pentamethylene pyrrolidinium bitartrate, a compound under trial.

Operation is successful for about 30% of persons having partial denervation and perhaps for 60% with total sympathectomy. After the first postoperative year, few relapses occur. An advantage over all other methods is that the subject's cooperation is not required, except for initial consent.

Low-sodium diet is effective for only a few patients. However, regardless of influence on blood pressure, the treatment relieves headache and dizziness and may be lifesaving for a patient with actual or impending congestive heart failure. Asymptomatic uncomplicated hypertension is rarely improved but may decline with a 200-mg. ration. Restriction must be continued at least three months before a final decision as to effects.

Rauvolfia serpentina (Raudixin) or reserpine (Serpasil) lowers high pressure in about 20 to 30% of instances (Table 1). Reduction is very gradual and safe, starting two weeks to three months after the first dose. Once established, the reduction does not fluctuate with each dose. Therapy starts with the largest amount tolerated and decreases after pressure falls.

Reserpine, the pure alkaloid, seems responsible for most benefits. Oral therapy is suitable for early hypertension with anxiety and vasomotor storms, for elderly individuals, and as an adjunct to other medication. Occasionally extreme agitation is relieved for several days by 2 or 3 mg. of Serpasil administered in a slow intravenous infusion.

Hydralazine hydrochloride (Apresoline) is overstimulating for about 30% of patients and does not reduce pressure of 30%, but has a hypotensive effect on the other 40% (Table 2). However, toxic reactions may necessitate discontinuance.

Additional hexamethonium may eliminate untoward results, such as tachycardia, while strengthening depressor influence. Since reactions

TABLE 4. HEXAMETHONIUM CHLORIDE AND PENTAMETHYLENE PYRROLIDINIUM BITARTRATE

Drug and oral dose

Hexamethonium chloride (Esomid, Hexameton, Methium) 125 to 750 mg. orally three times daily after meals and at bedtime

Pentamethylene pyrrolidinium bitartrate, 10 to 200 mg. three to four times daily

Mode of action

Ganglionic blockade of both sympathetics and parasympathetics

Treatment objective

Pronounced orthostatic and some recumbent blood pressure reduction

Side effects

Useful—decreased incidence of vomiting

Unpleasant—weakness, cycloplegia, dry mouth, constipation, occasional dizzy spells, impotence

Serious—ileus, bladder paralysis, progressive azotemia

Precautions

Daily saline laxative; drug omitted if constipation lasts more than twenty-four hours

General contraindications

Prostatic hypertrophy, cerebral arteriosclerosis, azotemia

TABLE 5. ORAL DOSAGE PROGRAM FOR LONG-TERM TREATMENT OF HYPERTENSION

	Hexamethonium chloride	*Pentamethylene pyrrolidinium bitartrate*
Frequency	Three times daily after meals and at bedtime	Three times a day approximately seven hours apart
Total daily dose		
Initial	500 mg.	60 mg.
Daily increase	250 to 500 mg. daily (until standing blood pressure falls to 140 systolic just before the next dose)	30 mg. daily
Maximum	3 gm.	800 mg. (?)
Decrease or omit	If standing blood pressure is less than 120, give half the dose; omit if less than 100 or no bowel movement in twenty-four hours. Treatment must never be stopped abruptly for longer than necessary to secure adequate bowel activity or a restoration of blood pressure. Sudden cessation may lead to fatal hypertensive rebound. If treatment has been stopped for more than a few days, sensitivity will return and the dose must be reduced to avoid serious hypotension, then increased gradually as tolerance returns.	

may be grave, hydralazine should be used in small doses, whether alone or in combination, and if possible only after other agents fail.

Protoveratrine (Provell Maleate) does not have cumulative effects during advanced renal failure and may be useful when hexamethonium is hard to regulate (Table 3). Death from azotemia is not prevented, but cardiac and cerebral vascular symptoms are alleviated. Veratrum alkaloids are recommended for toxemia of pregnancy and hypertensive heart disease.

Ganglionic blocking agents are the most effective drugs for long-term therapy of severe hypertension, but the physician must be familiar with pharmacologic details (Table 4). Dosage is adjusted carefully for several months, until a steady phase is reached (Table 5). Treatment is usually started in the hospital, where amounts can be raised more rapidly and overdosage promptly corrected.

Pentamethylene pyrrolidinium bitartrate, a British product, may eventually replace hexamethonium, since hypotensive action is 5 times as powerful and continues 1.5 to 2 times as long, with less parasympathetic blocking. In this country, the drug has so far been distributed only for investigation.

Therapy for Primary Atypical Pneumonia

GORDON MEIKLEJOHN, M.D., UNIVERSITY OF COLORADO, DENVER, LT. COL. WILLIAM G. THALMAN, M.C., AND COL. DANIEL J. WALIGORA, M.C., FORT ORD, CALIF., C. HENRY KEMPE, M.D., UNIVERSITY OF CALIFORNIA, SAN FRANCISCO, AND EDWIN H. LENNETTE, M.D., CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH, BERKELEY, report that either aureomycin, Chloromycetin, or Terramycin may be more effective than penicillin in treatment for primary atypical pneumonia.

Each antibiotic was given to a separate group of young servicemen. Total duration of therapy was three to five days. Aureomycin, Chloromycetin, and Terramycin were given orally in doses of 0.5 gm. every six hours; the patients receiving Chloromycetin took, in addition, a 2-gm. priming dose initially. The procaine penicillin dosage was 600,000 units in a single injection, intramuscularly, each day.

Treatment was usually begun within four days after onset of illness. When temperatures did not exceed 102° F., a significant fall was frequently apparent within forty-eight hours, regardless of which antibiotic was employed. However, none of 12 penicillin-treated patients with fevers of 103° or more had reductions to 100° F. within forty-eight hours, while 33 of 47 patients receiving the other drugs did. Chloromycetin was most effective in this respect.

Chemotherapy of primary atypical pneumonia. J.A.M.A. 154:553-557, 1954.

Diagnosis of Acute Pericarditis

JOHNSON MC GUIRE, M.D., J. HAROLD KOTTE, M.D.,
AND ROBERT A. HELM, M.D.
Cincinnati General Hospital and University of Cincinnati

*Care must be taken to differentiate acute nonspecific pericarditis from myocardial infarction and other forms of pericarditis.**

CHEST pain is the most prominent symptom of acute nonspecific pericarditis, a serofibrinous inflammation of unknown etiology that occurs predominantly in males.

The pain, which is usually intensified by deep breathing, coughing, swallowing, or rotation of the trunk, may be localized in the precordium or substernal area or may radiate widely over the thorax, to the interscapular region, the neck, or the epigastrium. Involvement may extend into the shoulders or arms or, occasionally, down to the fingers. The left arm is usually affected.

Breathing may be rapid and shallow. Pulmonary congestion is rare and orthopnea uncommon.

Although malaise is frequent, anorexia, nausea, and vomiting are seldom seen.

The chief physical finding is a friction rub appearing early, often on the first day. The rub is of greater intensity and more widely distributed than with myocardial infarction and lasts about nine days.

Heart sounds may or may not be distant. Gallop rhythm and cardiac arrhythmias are infrequent.

Fever is a constant finding, usually on the first day of illness. Temperatures frequently reach 102° F., but sometimes are higher. Duration of fever is variable and may parallel the course of the disease.

In contrast to myocardial infarction, shock rarely occurs. Signs of tamponade are more frequent, although usually not severe enough to require paracentesis. Pleural effusion is common.

Fever, leukocytosis, and elevation of the sedimentation rate appear much earlier with acute nonspecific pericarditis than with myocardial infarction. A white blood count above 10,000 per cubic centimeter is found in almost all cases. The in-

*Acute pericarditis. Circulation 9:425-442, 1954.

creased sedimentation rate parallels the course of the illness.

Paracentesis often reveals bloody fluid. Straw-colored, cloudy yellow, and clear amber fluid may also be obtained. Smears, cultures, and cytologic studies are negative.

An enlarged cardiac silhouette on the roentgenogram may result from dilatation rather than massive effusion. A rapid change in heart size often aids in distinguishing the condition from myocardial infarction. Inflammatory changes may be seen in lung fields.

Electrocardiographic changes almost invariably appear. The S-T segment is usually elevated, with tall peaked T waves. After the S-T segments return to normal, the T waves may become inverted. QRS complexes are not affected.

The illness lasts from two weeks to three months. Prognosis is uniformly good. Recurrences are usually less severe and of shorter duration than the first attack. Chronic constrictive pericarditis is not a sequela.

Before treatment is attempted, rheumatic and pyogenic pericarditis and other causes of chest pain, such as pulmonary infarction, acute pleurisy, and angina pectoris, should be eliminated. Differentiation from tuberculous pericarditis, which subsides with prompt antibiotic therapy, is of particular importance.

The antibiotics and the sulfonamides are of no value in shortening the duration of nonspecific pericarditis or in lessening the severity of symptoms. Steroid therapy has been tried in only 1 case, but success of this trial should encourage further use.

Stasis-induced Thrombosis of Leg Veins

JOHN HOMANS, M.D., BOSTON, observes that thrombosis in the deep veins of the calf may suddenly occur after prolonged sitting. Propagation of clot and pulmonary embolism may follow immediately. Thrombosis is more apt to result when one or both of the legs rest on some sort of support, causing venous endothelial injury.

The rhythmic, forward, pulsatile motion of the foot, often noticed when one knee is crossed over the other, suggests compression of the popliteal artery of the crossed leg and concomitant venous stasis. Thus, movements of toes, feet, and lower legs are advisable when an individual must sit for long periods.

Persons over 50 years of age are particularly susceptible.

Physicians should be alert to recognize the significance of lameness after airplane flights, automobile trips, and other occasions of prolonged sitting.

Anticoagulants, bed rest, elevation, and elastic bandaging of the legs relieve the condition.

Thrombosis of the deep leg veins due to prolonged sitting. New England J. Med. 250:148-149, 1954.

Symposium on Hepatic Cirrhosis

PRESENTED AT THE EIGHTEENTH ANNUAL CONVENTION OF THE NATIONAL GASTROENTEROLOGICAL ASSOCIATION, LOS ANGELES, 1953*

Biopsy and Infrared Photography

I. R. JANKELSON, M.D.
NORMAN ZAMCHECK, M.D.
HENRY BAKER, M.D.

Boston City Hospital and Mallory Institute of Pathology, Boston

DIAGNOSIS of hepatic cirrhosis may be made by aspiration biopsy or photography of enlarged superficial veins in the abdominal wall.

The 2 methods are complementary. Serial specimens show disease of different types and grades and reaction to therapy. Infrared films are obtained with greater ease and safety than biopsy but demonstrate only longstanding portal hypertension and greater severity.

Needle biopsy reveals diffuse liver involvement in more than 90% of cases. However, insertion of the needle may be painful and may cause hemorrhage and bile peritonitis. The procedure is not warranted unless simpler diagnostic procedures fail, including batteries of liver function tests and a prolonged period of observation of the patient.

For safe, efficient sampling, the operator must be thoroughly trained and experienced or well supervised. The patient, who should be cooperative and not extremely ill, is hospitalized for one or two days for preoperative treatment and at least twenty-four hours for postsurgical care. Bleeding, clotting, and prothrombin times should be normal or nearly so.

Biopsy shows the degree of hepatic fibrosis, destruction and regeneration of liver cells, and infiltration with fat, plasma cells, leukocytes, or lymphocytes. Biliary obstruction and other disorders are observed but, as a rule, no hepatic lesions.

Infrared photographs, though not a substitute for histologic reports, do correspond well. The subject has no discomfort, no risk, and need not be hospitalized. No particular skill is required of the technician, and the films can be interpreted without difficulty.

The method brings out small collateral vessels not seen by the naked eye or ordinary exposures. The typical fine arborizations are pathognomonic of a prolonged hypertension due to cirrhosis and Banti's syndrome; widespread anastomoses are not demonstrable with such conditions as acute portal thrombosis or pyelophlebitis.

Repeated photography may expose further branching of congested veins but does not indicate im-

*Symposium on cirrhosis of the liver. Gastroenterology 21:9-45, 1954.

provement, since new vessels persist even when the hypertension has been reduced.

Hemorrhage and Coma

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Veterans Administration Center and University of California, Los Angeles

HEPATIC coma and gastrointestinal bleeding were reviewed in 162 cases of cirrhosis, 44 selected from autopsy protocols and 118 diagnosed during life. In the second category, 58 persons died and 60 were discharged from the hospital.

Coma—Appearance of central nervous symptoms with liver disease is a bad sign. The patient suddenly becomes drowsy and disoriented and has a flapping tremor at the wrists or knuckles and other neurologic disturbances. Sometimes the patient is noisy, but more often lapses into profound sleep and cannot be aroused.

Hepatic coma is apparently associated with high levels of blood ammonia. Medicine containing ammonium probably should be avoided and high protein intake prescribed with caution.

The only obvious reason for unconsciousness may be advanced cirrhosis, which is usually accompanied by jaundice. However, many episodes are precipitated by hemorrhage, infection, surgery, paracentesis, or medication, as after receiving opiates, barbiturates, or paraldehyde.

Occasionally, a coma associated with liver disease is actually due to electrolyte imbalance, drug poisoning, or even subdural hematoma.

Hepatic coma is usually but not always fatal. The prompt removal of an immediate cause or vigorous general treatment may be life saving.

Intravenous glucose, tube feeding, cortisone, and possibly use of intravenous glutamic acid may be helpful.

Hemorrhage—The first hematemesis is followed by death within a year in 70% of cases, but survivors may live as long as four years. If the liver is decompensated, surgical attempts to prevent bleeding may be dangerous. Conservative management is most effective when serum protein is abundant and jaundice lacking.

Modern Therapy

LESTER M. MORRISON, M.D.

Los Angeles

SINCE dietary measures were introduced for Laennec's cirrhosis about fifteen years ago, countless lives have been saved or prolonged. Early or slightly advanced cases may improve, although a shrunken, fibrotic liver resists any form of treatment.

Medical therapy—If a solid diet can be swallowed, at least 150 gm. of protein, 400 gm. of carbohydrate, and 100 gm. of fat should be eaten daily, more if possible. Alcohol is prohibited. Not less than 6 glasses of milk is taken per day, eggs once or twice, and meat at luncheon and supper.

A semiliquid diet includes strained

or puréed meats, vegetables, and cereals, gelatins, eggnogs, powdered milk drinks containing 1 or 2 tbs. of flavored brewer's yeast or equivalent vitamin B complex, and a potent supplement of all synthetic vitamins.

If unable to eat at all, patients without esophageal bleeding receive nourishing concentrates by nasogastric tube. For example, 150 gm. each of protein and carbohydrate may be taken in 2 liters of liquid, using 200 gm. of skim-milk powder and 20 gm. each of cocoa and sugar in 1 qt. of whole milk. Mixtures of predigested amino acids and carbohydrates are available.

A comatose individual may require blood transfusion with or without a continuous intravenous drip of 5 to 10% glucose solution. From 3 to 4 liters may be provided daily with 50 to 100 mg. of thiamin chloride and 250 to 500 mg. of nicotinic acid. The patient's blood electrolyte balance must be maintained.

If blood prothrombin is low, 72 mg. of vitamin K is administered daily. As a lipotropic agent, 20 μg. of vitamin B_{12} is injected daily into muscles or veins.

Doses of serum albumin are ineffective and may cause pulmonary edema or fatal bleeding. No parenteral amino acids should be used in cases with severe liver damage.

To limit edema and ascites, salt intake should not exceed 200 to 600 mg. per day. Mercuhydrin, 2 cc. intramuscularly twice a week, may be injected with caution. Treatment with cation-exchange resins is too complicated for routine use, owing to prevention of potassium deficit and other side effects.

When damage is reversible, lipotropic agents clear liver cells of fat. Most useful is 6 gm. of betaine or choline, or both, plus liver extract and vitamin B_{12} taken orally in divided doses daily after each meal. If preferred, methionine and inositol may be employed.

In addition to mobilizing fat, crude liver extract stimulates hepatic repair, improves appetite, and reduces antidiuretic hormones. From 1 to 3 cc. may be injected intramuscularly at daily to weekly intervals. From 10 to 30 μg. of vitamin B_{12}, B complex, or both may be given with liver extract or by vein, together with vitamins K and C.

Cortisone may be tried but only if other therapy is not successful. From 100 to 200 mg. is administered daily for two weeks, and subsequent doses according to effect.

Surgical therapy—The Sengstaken balloon is commonly inserted for massive bleeding from esophageal or gastric varices. During tamponade, feedings are continued through the Sengstaken nasogastric tube.

Blood is supplied until the hematocrit level is 40%, and 4,000 cc. of intravenous glucose solution is administered daily with vitamins. The balloon is generally removed in a few days and semisolid food begun. In most cases, one week of this regimen is sufficient before operation.

Blakemore's shunt from portal vein to inferior vena cava is usually the best method, but splenectomy and splenorenal shunt are done for extrahepatic portal block.

Procedures not yet sufficiently evaluated are [1] Garlock's mediastinal packing for esophageal varices and [2] ligation of hepatic and splenic arteries for ascites by the Rienhoff and Woods technic.

When ascites interferes with the patient's breathing or nutrition, abdominal paracentesis is done.

The most critical phase of Laennec's cirrhosis follows recovery from acute illness. A few individuals are helped by psychotherapy and many are aided by Alcoholics Anonymous.

Pathologic Changes and Tests

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College of Medical Evangelists, Los Angeles

THE most serious effect of hepatic cirrhosis is parenchymal injury combined with proliferation of connective tissue and usually with regrowth of liver cells. Liver functions are deranged, and shrinking of new connective tissue obstructs flow of blood and bile.

As pressure rises in portal veins, new collateral vessels develop, and varices form. Passive congestion of the spleen may cause anemia and other blood disorders.

Damage must involve more than 80% of the liver parenchyma to be detectable by functional tests, and no single procedure will reflect over-all capacity. Disturbance of excretory function, for instance, is indicated by the bromsulphalein method or by retention of intravenously injected bilirubin.

Metabolic disorders are more threatening. Synthesis of protein is impaired, and even in early stages low albumin and high globulin values are common. When plasma amino acids are increased, as in a patient who has far-advanced, usually terminal involvement, Millon's reaction in urine is a simple test for tyrosine and related compounds.

Cirrhosis may reduce fibrinogen, prothrombin, and cholinesterase. The flocculation tests depend on delicate alterations of serum protein and lipid, however, and results are not always concordant.

Since the liver normally stores glycogen, hypoglycemia may occur, and, occasionally, preexistent diabetes improves. Impaired glycogenesis is indicated by the galactose tolerance test.

Advanced disease involves other organs, particularly the gastrointestinal tract, kidneys, circulatory system, and central nervous system. The brain is highly sensitive to hypoglycemia.

The spleen may be enlarged partly because of degenerative liver products or infection. In a few cases, dark bile and intensely colored feces may call attention to a hemolytic component requiring splenectomy.

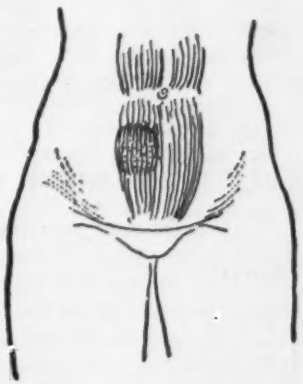
Breakdown of many functions in various degrees and combinations eventually results in renal failure, hemorrhagic diathesis, loss of essential glucose and vitamins, the blocking of enzyme systems, poisoning by toxins, and circulatory collapse.

Cholemia or coma announces the final fatal stage.

Rectus Muscle Hematoma

PETER ROGATZ, M.D., AND IRA L. RUBIN, M.D.
Montefiore and Veterans Administration hospitals, Bronx, N. Y.

*Sharp abdominal pain around a sensitive, rapidly enlarging mass should suggest hemorrhage of the rectus muscle.**



SPONTANEOUS hemorrhage into the rectus abdominis muscle is often misdiagnosed as appendicitis, twisted ovarian cyst, or other acute intraabdominal disease. Less than 20% of cases are properly recognized before operation.

Rectus muscle bleeding occurs at all ages but is 3 times as frequent in women as in men. Five chief causes are recognized, although in many cases etiologic factors are combined.

1] During pregnancy, dilatation of the inferior epigastric veins and stretching of rectus muscles predispose to hemorrhage, especially in multiparous women. Most cases occur ante partum, usually in the third trimester.

2] Trauma, usually internal, may be associated with physical exertion in a healthy individual or severe coughing in an acutely ill person. Vomiting and convulsions may also precipitate bleeding.

3] Acute infectious diseases such as typhoid fever, pneumonia, or influenza cause degenerative changes in abdominal muscles. Increased venous engorgement and minute thrombi in arterial capillaries contribute further damage to the musculature.

4] Hemorrhage regarded as idiopathic most often occurs in old persons. Degenerative vascular and muscular changes, particularly in multiparous women, are probably responsible in such instances.

5] Hemorrhagic tendency, a rare factor, may account for rectus hemorrhage associated with leukemia or blood dyscrasias.

Onset of hemorrhage is usually sudden, with sharp abdominal pain, nausea, and thoracic respiration. Temperature may rise to 101° F.; moderate leukocytosis is common. The most significant physical finding, however, is an abdominal mass, which may be as small as a robin's egg or large as a football. Needle

*Hematoma of the rectus abdominis muscle. New York J. Med. 54:675-679, 1954.

aspiration of the mass may facilitate diagnosis.

Hematoma below the fold of Douglas, where the posterior sheath is lacking, may cause rigidity and rebound tenderness. In this area, the hematoma may extend medially or laterally beyond the margin of the lateral sheath or protrude into the abdominal cavity as a result of peritoneal distention. If the peritoneum ruptures, the mass disappears and signs of generalized peritonitis are seen.

Surgical evacuation of the hematoma is satisfactory and, if a pregnant patient is at term, caesarean section should be done. Deaths from rectus bleeding are rare except during pregnancy when the maternal and fetal mortality are high.

Cat Scratch Disease

WORTH B. DANIELS, M.D., GEORGETOWN UNIVERSITY, AND FRANK G. MAC MURRAY, GEORGE WASHINGTON UNIVERSITY, WASHINGTON, D. C., believe that an intradermal test with cat scratch antigen should be made when the etiology of a lymph node lesion is doubtful. Cat scratch disease is self-limited and benign but, because lymph nodes are enlarged, may be mistaken for grave granulomatous or neoplastic disease. The test may obviate biopsy.

Antigen is prepared by diluting pus from suppurative nodes with sterile isotonic sodium chloride solution in a 1 to 5 ratio. The material is heated to 56° C. for one hour on two consecutive days. Forty-eight hours after 0.1 cc. of the antigen is injected, a positive reaction is shown by a central papule 0.5 to 1 cm. in diameter or an area of erythema 1 to 6 cm. in diameter. The intensity of response varies, but positive reactions among healthy people are extremely rare. The disease agent has not been isolated.

Of 160 patients with positive reactions to the antigen, most had been scratched by cats. About half had a small primary skin lesion lasting many weeks. Lymph node enlargement up to the size of a golf ball usually appeared in one to three weeks and persisted for two weeks to six months. Common sites are the upper extremities, but some affected nodes are in unusual places such as under the edge of the pectoral muscle. Nodes are not always red and painful but are usually movable; a fixed node is often suppurative, with sterile pus. General symptoms of infection are common.

Therapy with oxytetracycline, chlortetracycline, and chloramphenicol may be beneficial.

Included in the differential diagnosis of cat scratch disease are tularemia, infectious mononucleosis, lymphosarcoma, Hodgkin's disease, tuberculous adenitis, lymphogranuloma venereum, and tumor.

Cat scratch disease. J.A.M.A. 154:1247-1251, 1954.

Diagnosis of Poliomyelitis

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RANDOLPH BATSON, M.D.
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*Although seasonal and age group incidences are well recognized, diagnosis of poliomyelitis should be considered at all ages or seasons.**

PREVIOUS disease and physical examination must be relied upon almost entirely in diagnosis of poliomyelitis. Usual laboratory studies are of value mainly for eliminating possibility of other disease.

Few cases of poliomyelitis are disregarded, but the diagnosis of the disease is often wrong. In a one-year period, 140 patients with poliomyelitis and 23 with a diagnosis of poliomyelitis who actually had other diseases were admitted tc Vanderbilt Hospital. Diseases mistakenly diagnosed included meningococcic and tuberculous meningitis, encephalitis, brain tumor, gastroenteritis, bacillary dysentery, tick typhus, and intussusception.

Approximately one-half of patients with poliomyelitis have prodromal symptoms before onset of paralysis which last one to three days and are associated with respiratory disturbances, gastrointestinal upsets, or slight neck stiffness. The patient is then asymptomatic for several days before the paralytic febrile period begins. The usual symptoms of fever, headache, vomiting, stiff neck, and muscular sensitivity and weakness are well known.

Physical examination should include a complete neurologic evaluation. Poliomyelitis is suspected when the spine is maintained in a rigid, fixed position. When sitting in bed, the patient usually assumes a tripod position, with both arms braced posteriorly. Other meningeal signs are usually seen. Muscle pain, spasm, and paralysis are easily demonstrated, though muscular weakness is often overlooked.

Care is important in differentiating between paralysis and the pseudoparalysis seen with scurvy, fractures, osteomyelitis, perinephric abscess, and hysteria. Patients with hysterical reactions usually have numbness in the part with pseudoparalysis. Hyperesthesia is common with poliomyelitis, but anesthesia is rare. Reflex testing early in the disease is of no diagnostic value unless asymmetry is severe.

Caution is necessary in interpreting laboratory studies. The peripheral white blood cell count is of little help. The spinal fluid leukocyte count is more important, but poliomyelitis may occur with a normal count. Quantitative values for spinal fluid protein may be normal early in the disease, and spinal fluid sugar remains normal.

*Pitfalls in the diagnosis of poliomyelitis. J.A.M.A. 154:1401-1403, 1954.

¶ HYPERCHOLESTEREMIA with coronary artery disease may be amenable to treatment with estrogens. When ethinyl estradiol was given to 20 male patients, M. F. Oliver, M.B., and G. S. Boyd, Ph.D., of the Royal Infirmary, Edinburgh, and University of Edinburgh, observed that the total plasma cholesterol was diminished by as much as 41%. Since the plasma lipid phosphorus is not affected, the total plasma cholesterol:phospholipid ratio is also depressed. An initial dose of 0.2 mg. daily was increased to the limit of tolerance in a long-term study. While the mechanism of action is unknown, similar changes occur during ovulation and the incidence of atherosclerosis among females is higher after the menopause.

Am. Heart J. 47:348-359, 1954.

¶ BRONCHIAL ASTHMA AND HAY FEVER may be effectively treated with hydrocortisone (Hydrocortone or Cortril) orally administered. The dosage preferred by Emanuel Schwartz, M.D., of Long Island College Hospital, Brooklyn, is 80 mg. daily initially, followed by a sharp reduction to 40 to 60 mg. a day in four equal doses. Moderate to excellent results were noted by 34 of 39 individuals with asthma given such therapy and by 9 of 10 with hay fever; slight relief was obtained by 1 subject in each group. Among 24 patients previously treated with cortisone, the effects were as good for 15 and superior for 8. Because of the short duration of therapy, side effects were slight, necessitating cessation of medication in only 2 instances.

J. Allergy 25:112-118, 1954.

¶ INTESTINAL AMEBIASIS and other associated protozoiases may be eliminated by the trivalent arsenical Balarsen (N-2-acetylamino-4-methylol cyclo-[ethylenedimercaptoarseno]-phenol). *Endamoeba histolytica* disappeared from the stools in 88% of 167 patients with slight or asymptomatic disease after dosages ranging from 3 to 22 mg. per kilogram a day were administered for five days. Concomitant infection with *Escherichia coli, Giardia lamblia, Trichomonas hominis,* and *Balantidium coli* was also often eliminated, but helminths were unaffected. Although dermal, gastrointestinal, or central nervous system toxicity was manifested in 12% of the subjects, Harry Most, M.D., of New York University, New York City, and associates observed that 80% of reactions occurred with doses greater than 10 mg. per kilogram a day and 50% when more than 15 mg. per kilogram of the drug was given daily.

Am. J. Trop. Med. 3:262-265, 1954.

Pancreatic Cysts and Lithiasis

CHARLES B. PUESTOW, M.D., AND WILLIAM J. GILLESBY, M.D.
Veterans Administration Hospital, Hines, Ill.

*Various operative procedures may be necessary to relieve the symptoms of cysts and lithiasis of the pancreas.**

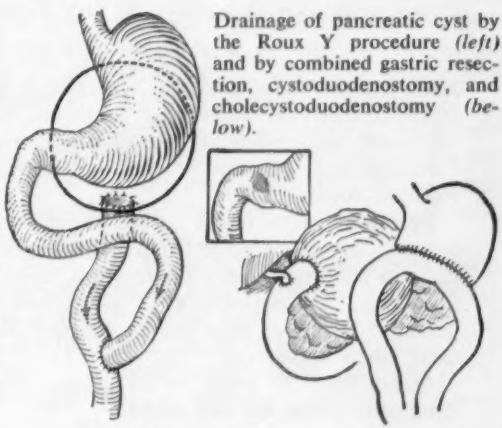
CHRONIC recurring pancreatitis is frequently complicated by calcifications and cysts, calcifications being noted in one-third to one-half of cases.

The cause of the inflammatory process is not definitely recognized, but the ingestion of ethyl alcohol may be a factor. Spasm of the sphincter of Oddi is produced, and the external secretion of the stimulated gland is prevented from reaching the duodenum. The regular imbibing of liquors containing methyl alcohol can cause subacute pancreatitis.

Nearly all pancreatic cysts are pseudocysts. Rupture of the duct from increased intraductal pressure allows secondary digestion and effusion of pancreatic juice into surrounding tissues. If the fluid reaches the peritoneal cavity, chemical peritonitis may occur. The peritoneum will localize the effusion by forming a cyst with walls composed of structures in the area.

Marsupialization is the usual surgical treatment for the pseudocyst and may be necessary when the cyst is badly infected. However, a pancreatic duct usually communicates with the cyst, and much electrolyte-containing fluid can be lost before the fistula finally closes. Excision of the cyst is usually not possible, since the base is ordinarily below the pancreatic surface, the walls are not clearly defined, and no pedicle is formed.

Internal drainage, by anastomosing the cyst to the stomach or to the upper small intestine, allows the cyst fluid to be returned to the body. A Roux Y cystojejunostomy can be utilized for cysts of the body or head of the pancreas. When



Drainage of pancreatic cyst by the Roux Y procedure *(left)* and by combined gastric resection, cystoduodenostomy, and cholecystoduodenostomy *(below)*.

*Management of pancreatic cysts and pancreatic lithiasis. Am. Surgeon 20:355-362, 1954.

accompanied by an obstructing duodenal ulcer, a gastrectomy, cystoduodenostomy, and cholecystoduodenostomy may be performed (see illustration). Gastric resection probably decreases pancreatic secretion and pain.

About one-third of pseudocysts are associated with pancreatic calcifications, which are found throughout the gland and not limited to the duct area. The condition is due to saponification and subsequent calcification of the soaps in the pancreatic tissue. Rarely, a stone is found in the duct. Partial pancreatectomy is necessary when calcification and fibrosis are extensive.

The intractable pain of chronic recurring pancreatitis is often difficult to manage. Cholecystectomy with long-term drainage of the common duct should be tried first. If the pain is unrelieved, a continuous epidural injection or bilateral splanchnic block is employed to determine if nerve section will be beneficial.

If pain is relieved, splanchnicectomy and sympathectomy may be done on the side of the pain, usually the left. A transthoracic approach is employed, with removal of the fourth thoracic through the first lumbar sympathetic ganglia, including excision of the splanchnic nerves and part of the celiac plexus. A right sympathectomy may be done about two weeks later if left sympathectomy fails.

Choledochojejunostomy by the Roux Y technic for chronic pancreatitis may be attended by formation of a duodenal ulcer, since bile is not in the area to buffer the gastric acids. If the procedure is used, a subtotal gastrectomy should also be performed.

When no other operation affords relief from the pain of chronic pancreatitis, unilateral chordotomy may be advisable.

Preoperative Neomycin for Bowel Surgery

CAPT. JOHN H. DAVIS, LT. COL. LUDWIG R. KUHN, COL. JOSEPH R. SHAFFER, AND COL. WILLIAM H. AMSPACHER, BROOK ARMY MEDICAL CENTER, FORT SAM HOUSTON, TEX., find that neomycin effectively suppresses all intestinal bacteria, including *Proteus* and *Pseudomonas*, apparently without causing the development of resistant forms.

For twenty-four hours before bowel surgery, 1 gm. of the antibiotic was administered to 25 patients every four hours. Another 25 patients each received a single 4-gm. dose twenty-four hours before operation. All patients were given low-residue diets and saline catharsis for three days before surgery. Preoperative enemas were used when necessary.

Overgrowth of yeast or fungi was not evident. Toxicity from drug absorption did not occur.

Preoperative preparation of the bowel with neomycin. Surgery 35:434-439, 1954.

Postoperative Water Intoxication

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*Severe cerebral disturbance or muscle weakness and extreme prostration occurring in the postoperative period may be due to water intoxication.**

THOUGH healthy individuals can drink large volumes of water safely, sick persons may not excrete an excess of water. If the water is given without electrolytes, the retained liquid dilutes the body fluids and lowers the osmotic pressure. The resulting hypotonicity provokes symptoms of disordered cerebral function.

Water intoxication is associated with low plasma-sodium concentration, which is also found in cases of sodium depletion or symptomless hypotonicity. These 3 conditions comprise the hypotonic syndromes. Because of differences in therapy, distinction between water intoxication and sodium depletion is especially important.

Persistent and resistant low plasma-sodium concentrations may be found in chronically ill patients and has been termed *symptomless hypotonicity*. The condition is distinguished from both true sodium depletion and sodium dilution by chronicity and by the failure of added salt or of water restriction to correct the disorder. The cause is unknown and the condition resists treatment.

The *sodium depletion syndrome* is due to large losses of sodium and is associated with dehydration, hemoconcentration, hypotension, and urea retention.

Water intoxication may complicate any illness when free intake of water is associated with reduced excretion, as with some forms of cardiac, hepatic, or renal insufficiency and with prolonged anuria. However, most acute cases appear in the immediate postoperative period of patients without persistent oliguria or without any other evidence of renal failure.

Surgical patients are especially vulnerable to water intoxication because of the use of parenteral fluids and the disturbance of renal function after trauma. Anuria or oliguria usually occurs for twelve to thirty-six hours postoperatively and has been attributed to excessive secretion of antidiuretic hormone. Postoperative water intoxication appears most commonly in the same period and is due to error in fluid therapy.

Water by rectum, widely believed to be a safe route, is a prominent cause of water intoxication. However, such intoxication may even occur when patients take oral fluids under voluntary control. Patients

*Water intoxication. Lancet 266:587-594, 1954.

may have severe body fluid dilution and still be thirsty.

Though oliguria of the immediate postoperative period is usually recognized, prolonged failure of osmoregulation, caused by reduced ability to excrete water, may be overlooked. A patient's twenty-four-hour urine volume may be limited to 1 to 1.5 liters for some days postoperatively in spite of excessive water intake. In such instances, water intoxication may occur without other signs of renal failure such as increased blood urea or disturbance of acid-base balance.

Most patients with the disorder are elderly or chronically ill or have had extensive operations. Other factors adversely affecting renal function include acute blood loss, prolonged hypotension, excessive pain, electrolyte depletion, severe anemia, low serum proteins, adrenal cortical insufficiency, and cardiac, hepatic, or renal disease. Hypotonicity may affect the kidney; this tends to perpetuate the condition. Base losses, even though small, may act with water retention to produce profound hypotonicity.

Symptoms of acute water intoxication may start dramatically and are usually cerebral at first. Strange behavior, loss of attention, confusion, staring, aphasia, incoordination, sleepiness interspersed with periods of violent behavior, shouting, delirium, and extreme muscular weakness may soon be superseded by fits, coma, and hyperventilation. In less severe derangements, the symptoms are insidious at the onset and include lethargy, muscle weakness, sleepiness, disorientation, apathy, and prostration. Headache and muscular cramps are not prominent. The symptoms may be attributed to other causes such as sodium and potassium depletion, uremia, cholemia, or bronchopneumonia. Symptoms occur when the plasma-sodium level is about 120 milliequivalents per liter.

The physical signs of water intoxication are the reverse of those of sodium depletion. Weight is not lost but gained, and the patient lacks the haggard appearance of dehydration. Tissue turgor, elasticity, and eyeball tension are normal. The skin is warm, sometimes flushed, and moist. The blood pressure is normal or raised, and the pulse rate is normal. Muscle power may be greatly diminished or lost. With coma, the plantar responses are usually extensor.

With acute dilution, the hemoglobin and plasma-protein concentration are usually reduced by an amount reflecting an increase in the extracellular fluid and in blood volume. The plasma sodium and chloride concentrations are decreased as is the plasma bicarbonate, and the blood urea or plasma nonprotein nitrogen is usually low unless the patient has anuria. The volume and specific gravity of the urine depend on whether diuresis has begun. In gradually produced dilution, compensatory changes may have restored the potassium, bicarbonates, and nonprotein nitrogen levels to normal.

Treatment consists of restriction of water intake, and infusion of hypertonic saline is safe and effective for severe cases.

Therapy of Burns in Late Stages

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*Once the initial stage of shock and edema is past, severe and extensive burns must be managed on an individual basis to prepare for early skin grafting and to remedy metabolic derangements.**

DURING the first week after burn trauma, the chief concern is with therapy for shock and edema and with redistribution of fluids and electrolytes. In the later stages, continuity of the skin must be restored and physical rehabilitation effected.

After ten to twelve days, when healing of superficial lesions is evident, the depth of the burn may be estimated. Earlier evaluations cannot be trusted. With exposure therapy, the coagulum over areas of full-thickness skin loss is depressed and adherent to the underlying tissue. Over first- and second-degree burns, the eschar becomes raised and loose at the edges.

Deep burns of the dorsum of the hand must be grafted early, by the eighth to twelfth day if possible. The lack of protective subcutaneous tissue predisposes to necrosis, joint involvement, and tendon fixation. A one-piece, split-thickness graft should be applied to the back of the hand, extending to the midlateral line of the fingers, using V's, darts, or small palmar flaps in the interdigital spaces to prevent dorsal webbing.

Debridement may be done after two weeks, followed by skin grafting as soon as possible. Necrotic tissue must be removed mechanically to prepare for grafting. Chemical debriding agents are ineffective, toxic, irritating, or too slow to be practical.

Surgery should not be delayed longer than four to six days after debridement. If a crucial point is allowed to pass in severe, extensive burns, deep necrosis of tissues occurs rapidly, the patient's condition worsens, and the chance to graft is lost.

Wet dressings or macerating agents, such as Furacin-impregnated or grease gauze applied with pressure, are used to prepare the recipient areas. Antibiotics, especially neomycin, may be used locally if the wound is infected. The civilian defense burn dressing is quite useful when frequent change of dressings is required.

Systemic chemotherapy should be prescribed on the basis of blood and wound cultures and of individual sensitivity studies. Helpful adjuncts include frequent change of dry dressings, whole blood, a high-

*Late treatment of severe extensive burns. South. M. J. 47:371-374, 1954.

protein diet, and efforts to improve morale.

Blood transfusions should be given freely. With a severe burn, red cell loss is great from both destruction at the site of the burn and bleeding during dressing changes.

Forced feedings of protein concentrates should be started at the end of the first week. In some cases, supplementary drinks of Protenum, Provimalt, or Gevral with milk, providing about 135 gm. of additional protein daily, may suffice. With more severe damage, supplementary feedings may be given by intragastric drip through an indwelling polyethylene tube, starting with 2 gm. and increasing to 4 or 6 gm. per kilogram daily. Fat content is supplied by Ediol or Lipomul.

Vitamin supplements up to 1,000 mg. per day are also useful, including B_{12} and ascorbic acid. Potassium chloride, 3 to 5 gm., should be given daily if renal function is satisfactory.

At the first grafting, as much of the raw area should be covered as possible to lessen later losses of blood, plasma, and electrolytes. Homografts may be necessary during the emergency period when over 50% of the body is involved with third-degree burns.

Fine mesh gauze is used to cover granulation areas between grafts. When the donor sites heal, the patient may be bathed three times weekly in the Hubbard tank. After each bath, the grafts are examined carefully and any small pustules are opened with a sterile needle. Wet saline dressings are then reapplied to granulating areas.

The late occurrence of the shock syndrome, with loss of metabolic equilibrium and decreased resistance to infection, and Curling's ulcers should be anticipated.

Reconstructive procedures are best deferred for at least six months after successful grafting. During the interval, special precautions should be taken with involved legs and hands. Elastic stockings, avoidance of cold or trauma, elevation of extremities, active exercise of hands, emollient creams, and gloves may be necessary.

No effort should be spared to improve the patient's morale. Early ambulation, constant attention and reassurance, frank discussion to relieve uncertainty, and diversional occupational therapy are important.

¶ MECKEL'S DIVERTICULITIS may sometimes be diagnosed preoperatively by the appearance of cherry-red cellulitis involving the umbilicus and about 2 cm. of the surrounding area. This pathognomonic sign is ascribed by R. Robert DeNicola, M.D., of the Kadlec Hospital, Richland, Wash., to contiguous spread of inflammation along the vessels and tissue of the fibrous cord connecting the umbilicus and intestine. This residual from atrophy of the vitelline duct is not absorbed in about 20% of patients; hence the diagnostic phenomenon can be seen in about 1 of 5 cases.

J.A.M.A. 154:1083-1085, 1954.

Prolapse of the Gastric Mucosa

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*An operation may be necessary for prolapse of gastric mucosa when symptoms are severe.**

THE antral gastric mucosa may prolapse through the pylorus into the duodenum without any coexistent upper gastrointestinal lesion. Symptoms caused by obstruction, inflammation, or bleeding of the redundant mucous membrane may warrant surgery.

The diagnosis is made primarily by radiographic studies. A cauliflower-like defect often described as mushroom- or umbrella-shaped is seen in the base of the duodenal bulb, and folds of gastric mucosa are visualized in the pyloric canal and in the bulb. Widening of the pyloric canal is frequently evident when the prone or prone-right oblique position is used.

A smooth, crescent-shaped defect of the duodenal bulb caused by pressure or overlap of the pyloric valve is sometimes confused with prolapse. Pedunculated polyp, the induration associated with an ulcer, or duodenal inflammatory changes also must be considered.

The patient with prolapsed gastric mucosa is generally middle-aged and has upper abdominal pain not relieved by a medical ulcer regimen. Nausea and vomiting may be the most distressing manifestations. Change of position may alleviate night pain. Hemorrhage occurs among 25% of patients and is manifested by severe anemia, tarry stools, or hematemesis.

Physicians and surgeons are generally reluctant to advise surgery for prolapse unless another disease such as gastric ulcer seems probable or symptoms are severe. Gastric resection is the preferred procedure if a decision to operate is made. If resection is not performed, gastrotomy or duodenotomy or both should be done.

Less than half of the patients with uncomplicated gastric mucosal prolapse treated medically improved; most patients treated by gastrectomy are benefited.

*Prolapse of the gastric mucosa. S. Clin. North America 34:495-508, 1954.

Gastrointestinal Tract Lymphomas

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*A solitary malignant gastrointestinal lymphoma, amenable to excision and postoperative irradiation, has a better prognosis than carcinoma in a similar location.**

MALIGNANT lymphoid tumors may occur anywhere from the stomach to the rectum and are classified as either follicular lymphoma, lymphosarcoma, or Hodgkin's disease.

The submucosa is the usual site of origin, but adjacent tissues are infiltrated, and the mucosa may be eroded, with resultant hemorrhage. Regional lymph nodes are involved early.

STOMACH

Symptoms of gastric lymphosarcoma vary widely but may include epigastric discomfort, an ulcer-like syndrome, and loss of weight and strength. Vomiting is unusual.

Frequently only frozen section will reveal the diagnosis. Lymphosarcoma ordinarily cannot be differentiated from carcinoma roentgenographically, although gastroscopic examination may be helpful.

A solitary discrete gastric lesion is unusual in Hodgkin's disease. Manifestations may be indistinguishable from ulcer, carcinoma, or other neoplasm. Fever, adenopathy, and hematologic signs of the systemic disease may not occur. Roentgenographic and gastroscopic examinations are not definitive.

Localized involvement of the stomach by either lymphosarcoma or Hodgkin's disease should be treated by radical resection and postoperative radiation.

SMALL INTESTINE

The incidence of lymphosarcoma in the small intestine is only one-fourth that of carcinoma. The lymphosarcoma can be multiple; symptoms vary with the degree of obstruction. Slight fever and gross hemorrhage may be noted, and a mass is sometimes palpable. The lesion can be diffuse, polypoid, nodular, or sessile and most frequently lies in the lower ileum.

Roentgen therapy should follow adequate excision.

COLON

Malignant lymphoma is found more often in the colon than in the small intestine. The sigmoidoscopic appearance of colonic lymphosarcoma is usually diagnostic, but a biopsy is sometimes necessary. Proctoscopic examination of rectal lymphosarcoma may reveal broad-pedicled polyps.

Early radical excision should be done, followed by roentgen therapy. The prognosis is poor.

*Malignant lymphoma of the gastrointestinal tract. Arch. Surg. 68:179-190, 1954.

Problems in Cardiovascular Surgery

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*Physician and surgeon must work in close alliance when cardiovascular surgery is undertaken.**

A NUMBER of congenital and acquired heart lesions can be repaired with good to excellent outcome, for example, patent ductus arteriosus and mitral stenosis. Moderate improvement may be expected in other types of cases, such as aortic valvular stenosis.

Proper treatment of some disorders is still undetermined, however. Some methods have proved unsatisfactory, and others are too recent for proper evaluation.

CONGENITAL HEART DISEASE

Patent ductus arteriosus should be corrected between the ages of 2 and 10 years, before appearance of left ventricular hypertrophy and strain. The opening may be large without causing the familiar machinery murmur.

Operative results are among the most gratifying; removal of the systemic-to-pulmonary shunt leaves the circulation essentially normal.

Coarctation of the aorta is ideally repaired at ages of 6 to 16 years. Nevertheless, with early heart failure, a child of 10 weeks may be operated on successfully.

Many surgical candidates over 21 years old are accepted. But when hypertension is significant and warning symptoms are delayed until the third, fourth, or fifth decade, arteriosclerosis and aneurysm may be formidable obstacles.

Stenosis of the pulmonary valve, with or without a patent foramen ovale, may be corrected by valvular division and dilatation through the right ventricle. Surgery is required if the child has symptoms, the heart continues to enlarge, or a cardiac catheter shows severe right ventricular hypertension.

The tetralogy of Fallot, including pulmonary atresia or stenosis with a high ventricular defect and overriding aorta, accounts for most operations for congenital defects. In a review of the first 857 cases, good results are cited for 78%, with surgical mortality of 15%, after creation of a systemic-pulmonary artery shunt.

Transposition of the great vessels, auricular and ventricular *septal defects,* and *anomalies of venous return* are now under surgical attack. Although clinical and experimental results are sometimes excellent, further investigation is necessary.

ACQUIRED HEART DISEASE

Wounds of the heart require open operation if bleeding into the pleu-

*Problems in cardiovascular surgery. Ann. Int. Med. 40:1-10, 1954.

ral cavity or to the outside continues. Otherwise, time is taken for at least 1 pericardial aspiration. An operative team should be alerted for emergencies, but if no surgeon is available, a physician should begin treatment.

Acute tamponade may be relieved by aspiration of just 1 or 2 oz. of blood. Fortunately, most patients improve with closed withdrawal, and hemorrhage does not recur.

Constrictive pericarditis is generally a result of tubercular scars, which may bind the great vessels as well as the heart. The most important phase of surgery is decortication of right and left ventricles; auricles are seldom stripped.

For the best exposure, a long, left intercostal transpleural incision is made, dividing the fourth and fifth costal cartilages. The diaphragmatic aspect of pericardium should be removed from the heart in order to allow free systolic contraction.

If the patient is protected by antibiotic therapy, operation may be ventured before active infection subsides, but more experience is needed to determine the best time for surgery.

Aortic aneurysms in the thorax are saccular, as a rule, and usually result from syphilis; most abdominal lesions are fusiform and caused by arteriosclerosis. In Blakemore's method of repair, the aorta is constricted proximal to dilatation, and fine heated wire is inserted into the sac.

With another technic, a sac anywhere on the vessel may be excised and the neck closed. In some cases, a fusiform abdominal swelling is replaced by aortic homograft.

Mitral stenosis is approached with remarkable success. The procedure is straightforward, symptoms are greatly reduced in most cases, and if embolism could be prevented, surgical mortality would be well under 5%.

The most difficult problem in mitral stenosis is selection of cases. Good indications for surgery are signs of stenosis that occur with symptoms of pulmonary engorgement, including dyspnea, cough, orthopnea, and hemoptysis. However, some experienced surgeons operate for the valvular lesion as such, with or without symptoms.

Because current operations for insufficiency are not entirely satisfactory, decisions must be made as to whether stenosis or insufficiency predominates, and what course to follow in either case. Moreover, diagnosis may be confused by atypical murmurs.

Yet most persons who have surgery feel a great deal better, and pressure is considerably lower in the left auricle and pulmonary vessels.

Postoperative care is a challenge to the best medical and surgical teamwork. Parenteral blood and fluid therapy must be adjusted delicately for just enough cardiac output. Physical activity should be adequate to prevent hypostatic pneumonia, but should not burden the heart. Auricular fibrillation may ensue, or rheumatic fever reappear.

Aortic stenosis presents a more

difficult and dangerous situation than mitral impedance. The surgeon may hesitate to interfere when the condition is stabilized, but sudden myocardial failure is not unlikely, and results of operation are encouraging.

The most effective plan utilizes a dilator with 3 expanding bars guided by a wire introduced through the left ventricle.

Valvular insufficiency involves a complex mechanism, and treatment may always be very hard, even if methods of extracorporeal circulation are perfected. Use of the pedicled transventricular pericardial graft has been abandoned after quite a number of trials.

Mitral lesions may be handled by Harken's technic, which anchors a plastic bottle-shaped device near the mitral ring. In Bailey's method, lips of the incompetent valve are partly sewed together with a strip of pericardium.

Aortic insufficiency may be reduced by Hufnagel's plastic valve inserted in the descending thoracic aorta.

¶ ACUTE CHOLECYSTITIS can often be differentiated from other gallbladder diseases and nonbiliary intraperitoneal infections by the bromsulphalein test. In 22 of 23 cases of acute inflammation of the gallbladder, the results of such tests were positive, and W. Burnett, M.B., of the University of Aberdeen, Scotland, found that the amount of dye retained paralleled the degree of inflammation. Retention of the dye occurred for only 5 of 55 patients with other intraabdominal conditions. Previous administration of morphine regularly or of Pethidine (meperidine hydrochloride) or Amidon occasionally results in false-positive reactions. The bromsulphalein test may be of value in guiding management of acute cholecystitis.

Lancet 266:488-490, 1954.

¶ ACUTE HYPOTENSION unresponsive to blood transfusion may be corrected, and irreversible shock averted, by continuous intravenous administration of Neosynephrine. To obtain the desired pressor effect without overloading the circulation, Harold F. Rheinlander, M.D., Robert M. Kaplan, M.D., and Benjamin Etsten, M.D., of Tufts College, Boston, adjust the concentration of the drug and the rate of infusion to circumstances. In a group of 5 patients the strength of the infusate was from 10 to 800 mg. per liter. In 1 case of massive hemorrhage, the total dosage for the six days of infusion was 2,539 mg. The concentration, 40 mg. in 500 cc. of 5% dextrose in water at first, was gradually decreased. In another case, 2,510 mg. was administered in a concentration of 80 mg. in 500 cc. for four days.

Bull. New England M. Center 16:1-7, 1954.

Operative Cholangiography

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*A secondary operation may be required unless cholangiographic examination is made during surgery.**

EVEN after thorough surgical exploration, stones may be left in the common or hepatic ducts. Cholangiograms made during surgery reveal residual calculi, thus obviating the increased morbidity and mortality risk of a later operation. When made before the duct is opened, such studies may prevent unnecessary exploration.

Accuracy depends upon technic and interpretation. Air bubbles must be eliminated. Very small stones may be concealed when enveloped by the contrast medium. Difficulty in differentiation of stone, tumor, or pancreatitis may be resolved by careful consideration of the pathologic physiology. A sharp cutting off of contrast media may suggest cancer; pancreatitis may be revealed by a gradual decrease in the caliber of the duct. Mulsopaque is a good contrast medium.

Pancreatic reflux probably has little significance when caused by stone obstruction at the ampulla. Removal of the obstruction should prevent recurrent pancreatitis.

Reflux without a stone or previous pancreatitis may be a result of mechanical difficulty of injection, such as too forceful filling of the ducts. Sphincterotomy should be done when reflux takes place with recurrent pancreatitis.

With cholelithiasis, stones may lodge in the common duct without causing signs or symptoms. Operative cholangiograms can be made using a catheter through the cystic duct without appreciable time loss or increased morbidity.

Although some patients with acute cholecystitis have stones in the common duct, cholangiograms are often of limited value and frequently increase morbidity. Local complications and slight cholangitis may be provoked.

Transient episodes of pain associated with a slight febrile reaction may be seen when 30 cc. or more of contrast medium is used; 5 to 10 cc. should be adequate. Rapid disappearance of symptoms suggests a temporary cholangitis or pancreatitis secondary to reflux.

*The case for operative cholangiography. Surg., Gynec. & Obst. 98:233-236, 1954.

Toxemia and Vascular Damage

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*If allowed to continue longer than about one month, the generalized vasoconstriction that is characteristic of toxemia apparently causes permanent vascular damage.**

WHETHER toxemia causes irreversible vascular injury has long been debated. The main reason for the controversy has been a mistaken diagnosis during pregnancy—a diagnosis of toxemia being made when the patient actually has hypertensive vascular disease. Of 303 pregnant patients referred to a toxemia study clinic at the Gallinger Municipal Hospital, Washington, D. C., only 14% met the true criteria.

True toxemia of pregnancy and hypertensive vascular disease are most readily differentiated by funduscopic examination. With toxemia, the retinal vessels are normal except for segmental vasospasm. Increase in the arterial stripe, tortuosity, and arteriovenous nicking are not seen. The entire retina appears wet and glistening, seeming to be covered by a thin film of fluid. Superficial retinal edema, a consequence of vasospasm, may be the cause. The reflections seen through an ophthalmoscope resemble the reflections of lights on a wet street at night. Therefore, the examiner has difficulty in sharply outlining the retinal vessels.

The retinal sheen is not a specific finding for toxemia of pregnancy. However, the sheen always occurs with true toxemia but is never to be seen with hypertensive vascular disease. If a generalized sheen appears and retinal arteries are normal, true toxemia exists, regardless of age, parity, blood pressure level, pulse pressure, degree of edema, or albuminuria. As toxemia increases in severity, the sheen becomes more obvious; as toxemia subsides, the sheen disappears.

Hypertensive vascular disease exists if no retinal sheen appears and hypertensive retinopathy is seen. If retinal sheen and hypertensive vascular changes are noted, toxemia is superimposed on hypertensive vascular disease. Finally, if neither retinal sheen nor hypertensive retinopathy is seen and the arterial blood pressure is elevated, the patient has early hypertensive vascular disease.

In 20 of 45 patients with true toxemia whose retinas were entirely normal before the toxemic episode, definite retinopathy was evident six weeks post partum. In these 20 patients the following sequence of events occurred:

1] Normal blood pressure with normal fundi and no manifest signs

*Does vascular damage follow toxemia of pregnancy? J.A.M.A. 154:1075-1079, 1954.

of toxemia at three months of gestation

2] Elevated blood pressure with generalized retinal sheen, edema, and albuminuria at the height of toxemia

3] Normal blood pressure, definite retinopathy, and no manifest signs of toxemia six weeks post partum.

These patients now have vascular disease without hypertension or obvious renal impairment. The retinal changes appear permanent.

If the arterial pressure becomes elevated during a subsequent pregnancy and no retinal sheen occurs, the disease is hypertensive vascular disease, not toxemia. If a retinal sheen should return, toxemia is then superimposed on hypertension.

The important consideration is that, once retinal changes develop, the patient will not have true toxemia again. Either the subsequent pregnancy will be normal, as with some hypertensive patients, or hypertension will be aggravated by pregnancy, or toxemia will be superimposed on chronic hypertension.

Edema Control in Prenatal Patients

JAMES P. BAKER, M.D., AND HERBERT A. CLAIBORNE, M.D., UNIVERSITY OF VIRGINIA, CHARLOTTESVILLE, JOSEPH J. LEHMAN, M.D., COLORADO AGRICULTURAL AND MECHANICAL COLLEGE, FORT COLLINS, AND COMDR. WILLIAM S. BAKER, JR., M.C., U. S. NAVAL HOSPITAL AND NAVAL MEDICAL FIELD RESEARCH LABORATORY, CAMP LEJEUNE, N.C., find that cation-anion exchange resins may be successfully employed for the control of edema and excessive weight gain in prenatal patients.

Carbo-Resin is used for the reduction or elimination of edema during the third trimester. Daily doses are 48 to 96 gm. in water, milk, fruit juice, or carbonated beverage. The average weight loss after ten days of therapy is 1.5 lb. The drug is less effective in control of excessive weight gain.

Patients may be treated without hospitalization. Sodium intake and physical activity are not restricted. Care is taken to insure adequate bowel evacuation since the efficacy of the exchange resins is directly proportional to the frequency of bowel movements.

The use of any exchange resin has 2 inherent dangers: hypokalemia and the low-salt syndrome. Prolonged administration requires supplemental oral potassium. Serial electrocardiograms and repeated blood chemistry determinations are mandatory. However, short-term use of exchange resins, not exceeding five days, is safe.

Exchange resins should not be used in cases of severe renal tubular involvement.

The use of a cation-anion exchange resin in the control of edema and excessive weight gain in prenatal patients. Am. J. Obst. & Gynec. 65:969-980, 1953.

Advantages of Total Hysterectomy

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*Apart from eliminating possibility of cervical cancer, total instead of partial hysterectomy for benign pelvic disease obviates many unpleasant symptoms.**

COMPLICATIONS that sometimes arise from a cervical stump after incomplete hysterectomy make total operation preferred unless definite contraindications exist.

In the genetically predisposed patient, cervical irritations may favor production of carcinoma of the cervix. Also, an infected stump frequently causes pelvic pain, leukorrhea, bloody discharge, backache, bearing-down sensations, dyspareunia, and dysuria.

Definite lesions were found in 63.6% of cervices removed during 800 total abdominal hysterectomies for benign disease. Of the 509 diseased cervices, 152 had more than 1 pathologic process. The most common condition was chronic cervicitis.

Although the significance of some of the conditions may be questioned, development of symptoms seems likely if a diseased cervix is not removed.

Benign polyps left in a cervical stump almost always cause bleeding. Acute cervicitis, glandular hyperplasia, and erosion are likely to continue an annoying discharge.

Opinion is divided as to the influence of benign cervical lesions on the development of cancer, but many regard squamous metaplasia and basal-cell hypertrophy as precursors of carcinoma.

CERVICAL FINDINGS AT TOTAL HYSTERECTOMY FOR BENIGN DISEASE
800 cases—152 or 19% with more than 1 lesion

Condition	*Cases*	*Per Cent*
Histologically normal	291	36.4
Chronic cervicitis	273	34.1
Nabothian follicles	227	28.4
Squamous metaplasia	78	9.7
Erosion	31	3.9
Benign polyps	24	3.0
Basal-cell hypertrophy	21	2.6
Glandular hyperplasia	18	2.2
Acute cervicitis	12	2.0
Atrophy	6	0.7
Intraepithelial carcinoma	3	0.4

*A study of cervices removed at total hysterectomy for benign disease. Am. J. Obst. & Gynec. 67:293-296, 1954.

Rheumatic Fever: Differential Diagnosis

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*Fever, joint pain, or heart murmur associated with various diseases may lead to a mistaken diagnosis of rheumatic fever.**

CHRONIC slight fever, though suggestive of rheumatic fever when associated with a heart murmur, may be caused by tuberculosis, histoplasmosis, coccidioidomycosis, or other pulmonary or systemic diseases.

Of 2,045 outpatients referred for cardiac evaluation, 46.8% had no heart disease, 23.9% were in the rheumatic state, 23.6% had congenital heart lesions, and 117 or 5.7% suspected of having rheumatic disease had other conditions.

Joint pains, leukocytosis, and elevated sedimentation rate are features common to both rheumatic fever and rheumatoid arthritis. The sedimentation rate may be high with rheumatoid arthritis with slight symptoms, but with rheumatic fever an elevated value is usually associated with active disease. Permanent joint damage is pathognomonic of rheumatoid arthritis, but recognition requires prolonged observations. Occasionally, the differentiation between rheumatoid arthritis and rheumatic fever is not possible to make.

Great care must be exercised in distinguishing functional from pathologic heart murmurs. A cardiac neurosis may be caused by incomplete explanation of the insignificance of functional murmurs. Murmurs associated with congenital heart disease may be mistaken for rheumatic heart disease.

A careful history may disclose diphtheritic myocarditis or acute benign pericarditis previously diagnosed as rheumatic fever.

Physical findings may be misleading. On rare occasions hypertension is due to cervical ribs rather than cardiorenal disease.

Arrhythmias are not always attributable to organic heart disease and may be noted in apparently normal patients.

Respiratory infections with fever, diffuse muscle aches and pains, and functional murmurs may easily be confused with rheumatic fever. Allergic asthma and rhinitis may also resemble rheumatic disease. Thorough study of nose, throat, sinuses, and lungs may aid differentiation. Reactions to antibiotics and antihistamines should also be observed.

Various anemias may be the source of fever, joint pain, and cardiac murmur. Enlargement of the heart, tachycardia, and cardiac insufficiency may also occur. A sickle-

*Conditions clinically confused with the rheumatic state. J. Pediat. 44:414-420, 1954.

cell preparation should be mandatory for every Negro patient. Determination of bleeding and clotting time, clot retraction, platelet count, red cell fragility, hematocrit, and cell indexes and a bone marrow biopsy may be necessary to determine the cause of anemia.

The possibility of endocrine and nutritional disorders, often associated with anemia and cardiac manifestations, should be eliminated by appropriate clinical and laboratory determinations. Repeated urinalyses may disclose glomerulonephritis coexistent with rheumatic fever.

Neurologic disorders also present diagnostic difficulties. Seizures with dyspnea and cyanosis may be attributed to circulatory insufficiency. Poliomyelitis with slight fever and muscle aching should also be considered.

Low-Salt Syndrome in Hot Weather

MARY E. EVANS, M.D., UNIVERSITY OF KANSAS, KANSAS CITY, warns that many parents are not alert to a child's need for extra salt during hot summer months. The low-salt syndrome should be suspected when a child becomes lethargic or loses appetite in hot weather. If untreated, the condition may be fatal. Children with fibrocystic disease of the pancreas are particularly susceptible to heat stress and should receive extra sodium chloride during warm seasons.

A child may be drowsy or even comatose when first seen, possibly with large pupils that react poorly to light, positive Babinski sign, and hypoactive deep reflexes. Treatment includes oxygen by mask or tent and salt intravenously until improvement ensues. Avertin may be given by rectum for relief of stiffness of extremities.

In a recent case, a 14-month-old child was brought to the hospital in a lethargic state after being bumped on the head. Bilateral temporal burr holes were made before the true diagnosis was indicated by the finding of low chloride in the spinal fluid. Vomiting of coffee-ground material, opisthotonos, and convulsions occurred. Within twenty-four hours of administration of large amounts of salt, the child was well. A total of 18.3 gm. of sodium chloride was given in two days intravenously.

A good prophylactic measure in hot weather is to give hospitalized infants and young children mixtures of Darrow's solution and glucose water, instead of ordinary water, between feedings; older children should receive 0.5 to 1.5 gm. of salt per day in addition to the regular hospital diet.

The low salt syndrome in children during hot weather. J. Kansas M. Soc. 55:125-129, 1954.

Prevention of Anesthetic Explosions

JOHN BULLOUGH, M.B.
Dartford Group of Hospitals, Kent, England

*Ignition of anesthetic gas mixtures in the operating room can be prevented by a withdrawal method.**

A FATAL accident may occur when a collection of gases, even at a distance from the operating table, is ignited. A flame traverses the room and enters the anesthetic apparatus by way of a leak, causing gases in the apparatus and the patient's air passages to explode. This type of explosion can be avoided by preventing the escape of gases into the room.

A T-junction is fitted into the machine to lead away the explosive fumes. The horizontal portion of the T has male and female connections which allow installation in any type of circuit. The vertical arm is ½ in. in diameter and can be opened or closed by a tap.

A tube connected to the arm of the T carries the gases out of the room. A window or door is satisfactory, but the preferred method is to provide a special outlet in the floor for the tube. A pipe from the outlet leads to the outside wall and is extended up the wall high enough so that the end is inaccessible to human reach. A wire cage over the pipe and a warning sign are additional precautions.

In a semi-closed system the T-piece is inserted between the valve-mount and the endotracheal adapter, or angle-mount to face mask. When the tap is open, the T-tube offers less resistance than the expiratory valve, and the gas will escape. When positive pressure is desired, the expiratory valve ought to be screwed down and the tap adjusted.

Even the closed systems of anesthesia may permit escape of gas if the bag becomes distended. In the circle absorption machine, the T-junction is plugged into the expiratory port. When the bag is too full, the tap is opened and the bag is squeezed until half empty. If flows more than 3 liters per minute are used, the tap can be set to allow a continuous escape of the excess gases.

The to-and-fro absorption system is adapted in one of two ways. The T-junction may be interposed between the bag and the cannister and opened when the bag is distended. A small tap and hose at the end of the bag serves the purpose equally well.

Gas-tight connections between the patient and the apparatus are necessary. A double cuff on the endotracheal tube provides insurance against leakage. Face masks with inflatable rims eliminate leaks at moderate pressures.

*Anesthetic explosions. Prevention by withdrawal method. Lancet 266:798-801, 1954.

Gastroesophageal Incompetence

ROY ASTLEY, M.B., AND IVO J. CARRÉ, M.R.C.P.
Children's Hospital, Birmingham, England

*Vomiting in infancy is usually the outstanding symptom of weakness of the valve mechanism between esophagus and stomach.**

REFLUX of stomach contents into the gullet occurs in the child with a short esophagus and a stomach situated partially above the diaphragm.

The diaphragmatic hiatus is wider than usual and, consequently, the pinchcock action of the muscular right crus of the diaphragm is decreased. The valvular element of obliquity of insertion is lost by direct entry of the esophagus into the apex of the stomach.

Repeated regurgitation of stomach contents into the esophagus may cause esophagitis with inflammatory edema and superficial erosion of the wall. Deep ulceration and esophageal strictures may subsequently form.

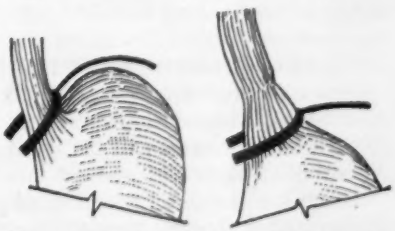
Vomiting usually begins soon after birth or during the neonatal period. In some children, however, vomiting starts when solid food is offered. The vomitus may contain altered blood and mucus.

Other manifestations include difficult swallowing of solid food, failure to gain weight, constipation, and iron-deficiency anemia.

When gastric peristalsis is visible and vomiting is projectile, hypertrophic pyloric stenosis should be considered in the differential diagnosis. Intestinal obstruction, intracranial lesions, aerophagy, other forms of diaphragmatic hernia, and renal acidosis should be excluded.

Radiologic examination of the gastroesophageal junction is facilitated by a continuous flow of contrast medium. Therefore, when possible, a feeding bottle is used for infants to administer the water and barium mixture. This is followed by a thick mixture given by spoon.

If reflux of barium from stomach to gullet is not obvious, maneuvers to raise the intraabdominal pressure can be tried. The child may be placed supine, with the head tilted down at 20 to 30°, so that barium accumulates in the gastric fundus. Firm abdominal pressure is applied,



Normal valve mechanism between the esophagus and stomach is shown at the left. The partial thoracic stomach at the rigth shows loss of the oblique junction, a wide hiatus, and a poor pinchcock of the right crus of the diaphragm.

*Gastro-oesophageal incompetence in children. Radiology 62:351-362, 1954.

as high under the ribs as possible, while more barium is swallowed. If this fails, the child may be rotated to the left posterior oblique position relative to the screen, and abdominal pressure is continued during the maneuver. The rotation brings air into the fundus and may provoke reflux of mixed air and barium.

Observation of the mucosal pattern is necessary to distinguish the thoracic portion of the stomach from the phrenic ampulla. Continuity of gastric mucosal folds is best seen with the child supine and slightly rotated in the right anterior oblique position so that the lower part of the gullet is clear of the spine. The exact relationship of the gullet to the diaphragm can then be ascertained.

In infancy, therapy should be conservative. Since a horizontal position encourages reflux, the child is fed, day and night, in a propped-up position maintained by a special harness. Thick feedings are given if vomiting persists. Weaning to solid food is frequently successful; when this occurs, symptoms usually cease by the age of 2.

Esophageal strictures necessitate radical surgery.

¶ RHUS DERMATITIS of the usual type is not ameliorated by topical application of hydrocortisone. Irwin B. Eskind, M.D., and Col. Rolland B. Sigafoos and Lt. Raymond W. Kelso, Jr., M.C., U.S.A., of the U. S. Army Hospital, West Point, N. Y., in treating 79 patients with the usual manifestations of ivy poisoning, found that placebos were just as effective as lotions, ointments, and creams containing as much as 2.5% of the hormone for alleviating pruritus, redness, and vesiculation. However, in 4 cases of extensive angioneurotic edema but no vesicular eruptions, the reactions of hypersensitivity yielded promptly to hydrocortisone.

Arch. Dermat. & Syph. 69:410-413, 1954.

¶ CHRONIC SKIN ERUPTIONS are more likely to be alleviated by a combination of crude coal tar and antihistaminic drugs than by either agent used alone. When Histar, a preparation of 5% liquor carbonis detergens and 2% pyrilamine maleate in an emulsified hydrophilic base, was applied locally, 35 of 54 patients with atopic eczema had rapid alleviation of pruritus and great improvement in the lesions, report Alex S. Friedlaender, M.D., and Sidney Friedlaender, M.D., of Detroit. Similar amelioration was obtained for the majority of 13 persons with contact-type dermatitis, psoriasis, nummular eczema, or seborrheic dermatitis of the ears. The results were excellent in 44 of the total 67 cases and only 11 of the individuals were not benefited; sensitivity to tar was observed in 3 instances.

J. Michigan M. Soc. 53:157-159, 1954.

Polymyositis: Diagnosis and Therapy

LEE M. EATON, M.D.
Mayo Clinic, Rochester, Minn.

*Cortisone may restore the muscular strength of patients with polymyositis and alleviate the dermatitis and constitutional symptoms of dermatomyositis.**

SYMMETRICAL muscular weakness, chiefly of the proximal muscles of the extremities, becoming moderate or severe within a period of weeks or months, is typical of polymyositis. The weakness may be unassociated with pain, tenderness, induration, atrophy, or reflex changes. The disorder is, apparently, a definite entity appearing either singly or associated with skin manifestations, as in dermatomyositis, or with other collagen diseases.

A study of 25 patients with polymyositis reveals that the disease is one of adult life with no particular predominance in either sex. Fever and weight loss are seen in about half the cases. Dysphagia is common and simulates cardiospasm. In some cases the eyelids and face are puffy and heliotrope in color.

The most consistent abnormality is the symmetric muscular weakness of pelvic and shoulder girdles and trunk groups. Rarely are the distal muscles affected. Atrophy is noted in about two-thirds of patients. Often no pain or tenderness is felt in the affected muscle groups. Fasciculations resembling the phenomena of anterior horn cell disease was demonstrated in only 1 of the 25 cases.

About two-thirds of patients have elevated basal metabolic rates but otherwise appear euthyroid. Electromyographic abnormalities nearly always found with polymyositis are increased irritability of muscle, fibrillation potentials during rest, increase in the number of waves indicating motor unit action potentials, and increase in the proportion of sharp spikes and polyphasic potentials of low amplitude. Muscle biopsies show degenerative changes and, usually, associated interstitial myositis.

The term dermatomyositis is used to designate polymyositis with cutaneous manifestations of dermatomyositis. The condition, which affects children and adults of either sex, is rare. Systemic symptoms are variable and ordinarily slight. Although vasospastic phenomena, arthritis, and arthralgia may be associated, the prominent manifestations are mainly muscular weakness of the polymyositic type and the dermatologic signs of inflammatory edema and erythema about the eyes, face, and extremities. Often the muscles are painful, hard, and swollen. The mortality rate is probably over 50%.

*The perspective of neurology in regard to polymyositis. Neurology 4:245-263, 1954.

Polymyositis is seldom diagnosed. Conditions erroneously considered in the 25 cases of polymyositis included muscular dystrophy, amyotrophic lateral sclerosis, myasthenia gravis, poliomyelitis, and Guillain-Barré syndrome. No one test is specific for polymyositis, and diagnosis depends on recognizing the constellation of symptoms, physical findings, and laboratory results.

Treatment must include physical measures to prevent contractures. Although antibiotics may be of some aid, 100 mg. of cortisone a day divided into 4 doses administered over a long time gives the best results. Improvement appeared in 5 cases of polymyositis and in 4 of the 11 cases of dermatomyositis in which therapy with cortisone was tried. Benefit was not seen with polymyositis until treatment had been continued six to eight weeks. Amelioration of the dermatitis and constitutional symptoms was more rapid, sometimes being obvious in a week or two. Arrest of the disease is all the benefit to be expected if the condition is of long standing.

Acquired Factors in Epilepsy

BUSHNELL SMITH, M.D., GEOFFREY C. ROBINSON, M.D., AND WILLIAM G. LENNOX, M.D., CHILDREN'S MEDICAL CENTER, BOSTON, stress the great variety of inherited and acquired factors that, alone or combined, may bring on some form of epilepsy.

Differences in selection of cases and in interpretation of evidence produce great diversity in data from various series. The entire problem should be approached with more uniform methods of diagnosis and review.

Records of 1,648 epileptics were investigated. A brain lesion apparently preceded the first attack in 535 noninstitutional cases, although evidence seemed conclusive in only 52%. Information was chiefly obtained from past events, but the electroencephalogram, description of attacks, neurologic examination, and pneumoencephalogram were useful in the order listed.

Approximately 9 of 10 had the first seizure before the age of 20, and about 1 in 4 had epileptic relatives.

Causes of brain lesions were prenatal in 13.3% of instances, natal in 30.1%, postnatal traumatic in 20.7%, infectious in 17.2%, miscellaneous in 6.4%, and unknown in 12.3%. Among older epileptics, postnatal trauma was more important than mishaps near the time of birth.

Nearly half the subjects had the first seizure within one year after the first known cerebral injury, but 12% not for ten to twenty years or more. The interval was longer after prenatal damage than after postnatal trauma or infection.

Acquired epilepsy: a study of 535 cases. Neurology 4:19-28, 1954.

Psychologic Reaction to Disease

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*Emotional reactions to acute or chronic illnesses can be anticipated and, therefore, ameliorated when basic behavior patterns are recognized.**

UNDESIRABLE behavior trends can be avoided or contained before barriers to favorable progress develop if the physician understands the emotional problems of the patients. The mechanistic concepts of disease should be moderated with an understanding of psychosomatic principles. Time and personal reserve must be sacrificed to supply the needs of the patient.

Some emotional manifestations are directly stimulated by organic somatic difficulty. Disturbed emotional states and behavior patterns may be caused by protracted pain, metabolic and hormonal upheavals, or other physiologic derangements. Fever and toxic states impart feelings of unreality and may disturb defensive and inhibiting mechanisms. Such manifestations are unavoidable and may be controlled only by appropriate and effective therapy of the somatic state.

However, most untoward reactions are psychogenic in origin. These emotional tensions must be curbed since the psychologic manifestations may [1] aggravate somatic disorders and cause further pathophysiologic disturbances, and [2] prevent the patient from observing the therapeutic regimen necessary for treatment. In many chronic diseases, these mechanisms eventually lead to complete invalidism.

BODY IMAGE

The mental image the patient has of the body is a basic factor in all illnesses. The concept of body image involves such factors as health, strength, cleanliness, and efficiency. Preservation of the total body image in the highest state of esthetic beauty and vital functioning is of great concern to all, and any illness or operation threatening the continued integrity of the body scheme may cause emotional problems.

The effect of the threat to body image depends upon the preexisting personality structure. Persons who were previously emotionally unstable may become completely disorganized, while those with healthy defenses to utilize may be scarcely affected.

ACUTE ILLNESS

Terror and disorganization accompany acute illnesses. The patient fears death or chronic dis-

*Psychologic needs of the medically and surgically ill patient. Wisconsin M. J. 53:158-160, 169-175, 1954.

ablement and has not had the opportunity to get business and spiritual affairs in order. Members of the family often communicate anxiety to the patient.

CHRONIC ILLNESS

When a chronic illness exists, a new person is created out of the old psychosomatic assets and disabilities with an entirely different set of relationships toward self and other people. Old conflicts and emotional patterns are used to crystallize attitudes to meet changed circumstances.

In the personality structure pre-existing illness or disability, emotionally charged conflicts were controlled by defensive and inhibitive mechanisms. Neuroses were concealed beneath socially acceptable behavior. However, the stress of chronic illness disturbs the emotional balance. Guilt, remorse, insecurity, and anxiety become manifest.

If a patient had a severe neurosis before illness, the disease may accelerate the neurotic process; but more often the hostile behavior pattern, unwholesome attitudes, and harmful demands of the patient are only a repetition of lifelong habits.

INTOLERABLE ANXIETY

Intense anxiety can be tolerated for only a certain length of time; eventually the patient will employ some technic to relieve the stress. A basic mechanism for such release is the obliteration of inhibiting mechanisms and the relinquishment of adult behavior. Childish behavior appears: irritability, tantrums, unreasonable demands, capriciousness, insistence on ritualistic patterns of treatment, and demands for special attention and affection from doctor, nurse, and family.

Other patients react as well-behaved children with submissiveness and respect. The chronically ill may establish a child-parent relationship with the physician or surgeon, become overwhelmingly dependent, and resist any effort to break the bond. Medication may become a symbol of the doctor and the patient may demand treatment as proof of the physician's interest. If narcotics are involved, the problem of addiction may arise.

Still other patients release anxiety by becoming hostile and aggressive. Means are sought to hurt themselves and others. A vicious circle is set up when hospital personnel react to such behavior in a personal manner.

EMOTION AND THE PHYSICIAN

Honest understanding and good communication are essential in the physician-patient relationship. Patients endure anything better than uncertainty. Explanations should be made in terms understandable to the patient. Misconceptions of the medical sophistication of the average citizen should be avoided. Size and general appearance of the patient should not be correlated with adequacy.

The nurse is also important in the emotional environment of the patient. The nurse's main contribution often is supplying psychologic needs of the patient rather than performing mechanical tasks.

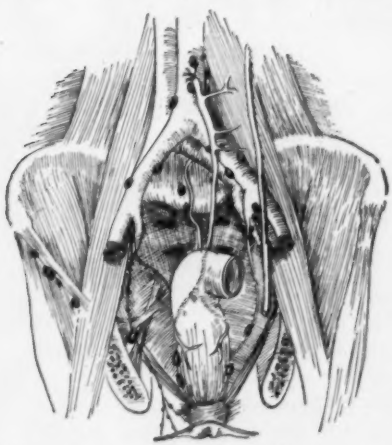
Lymphatic Spread of Rectal Cancer

JACK W. MC ELWAIN, M.D., HARRY E. BACON, M.D., AND HOWARD D. TRIMPI, M.D.
Temple University, Philadelphia

*Extirpation of cancers of the distal colon and rectum should include high ligation of the inferior mesenteric artery.**

ONE of the most important routes of cancer spread is the lymphatic system. The course of this system tends to parallel that of the corresponding vascular drainage. The lymphatics of the large intestine originate in the mucosa with tiny, blind-end lymph capillaries.

When intestinal surgery is done, the adequacy of collateral circulation assumes paramount importance. For this reason, the inferior mesenteric artery is usually ligated just distal to the left colonic branch.



Some rectal and anal lymphatic tracts

However, in 90 cases of distal bowel resection for cancer with ligation of the inferior mesenteric artery at the aortic origin, the blood supply to the distal bowel proved adequate. Of the 90 patients, 54 had lymph nodes metastases, 17.8% being located at the origin of the mesenteric artery. Liver metastases were observed in 11 patients. The mesenteric nodes were felt in 9 of the 11 patients.

All rectal lesions initiated an orderly pattern of superior lymphatic spread, but 2 cases of sigmoidal lesions demonstrated skipping of intermediate and regional nodes.

Nodes near the origin of the inferior mesenteric artery were involved in 12 cases without liver metastases. The nodes from 4 of these positive cases could have been removed by ligating the inferior mesenteric artery just distal to the left colonic branch. Nodes in the remaining 8, however, could be adequately removed only by high ligation. Thus, positive nodes would have been left behind in 9% of patients if high ligation of the inferior mesenteric artery had not been done.

*Lymph node metastases: experience with aortic ligation of inferior mesentery artery in cancer of the rectum. Surgery 35:513-529, 1954.

Orthopedic Problems in Children

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*Early treatment of orthopedic abnormalities in children under 5 years of age is necessary to ensure the greatest possible benefit.**

DETECTION of lesions of the bones, joints, or extremities in the very young child is often difficult. Diagnosis is primarily the responsibility of the pediatrician or general practitioner.

Abnormalities may be classified into 2 groups: [1] those seen in infants from birth to 1 year of age and [2] those seen in children of 1 to 5 years.

THE FIRST YEAR

Congenital muscular torticollis is due to circulatory stasis and usually involves only 1 sternocleidomastoid muscle. A hard, immobile, fusiform swelling is in the muscle at birth and is usually detected by 2 weeks of age.

The muscle is shortened and the face gradually turns away from the affected side. If the contracture is untreated, the skull becomes foreshortened in the oblique fronto-occipital diameter, the level of the eyes changes, the mastoid process becomes increasingly prominent, and the clavicle and shoulder are elevated on the affected side.

Diagnosis should include roentgenographic examination of the cervical and upper thoracic portions of the spine to detect a possible congenital vertebral abnormality.

During the first six months, the lump should be massaged and the infant's head daily turned opposite to the pull of the diseased muscle. Surgery is advised if the tumor continues to grow in size after six weeks and if the torsion of the head increases. The earliest age for intervention is preferably 6 months.

Fracture of the clavicle of the newborn is common. Diagnosis is made when the baby performs the Moro reflex asymmetrically with the arms. Roentgenograms are confirmative. Other causes for an asymmetric Moro reflex are long bone fracture, brachial plexus injury, and epiphyseal separation of the humerus. Therapy may not be necessary.

Fracture of the upper arm is uncommon and is noted just below the insertion of the deltoid. Early simple fixation by splints is done.

Recovery from *brachial plexus injury* depends upon the extent of nerve damage. Complete plexus injury causes impairment of abduction and external rotation of the arm, flexion and supination of the forearm, and wrist dorsiflexion. Phrenic nerve injury is sometimes associated and may be fatal.

Injury of the lower roots, Klump-

*Orthopedic problems in children. Pennsylvania M. J. 57:339-344, 1954.

ke's paralysis, is rare. The intrinsic hand muscles are paralyzed and the hand may be red and swollen. A homolateral Horner's syndrome occurs.

Before treatment for brachial plexus injury is begun, radiologic examinations should be made. The therapy for associated diaphragmatic paralysis is supportive and symptomatic.

Epiphyseal separation will occur most often after breech delivery and is seen in the upper humeral and upper or lower femoral epiphyses. When the humerus is affected, the limb is extended, limp, and is externally rotated. With femoral damage, a frog position is maintained. Local tenderness and pain occur with passive motion. Roentgenograms are negative for at least the first five days of life.

No specific therapy is necessary, but the patient should be observed until the callus is absorbed and weightbearing is begun. Hypocalcemic tetany may occur during healing.

Limitation of abduction of the thighs is the earliest sign of *dysplasia, subluxation, and luxation of the hip* but is not always pathognomonic. The folds or inguinal creases, buttock, thigh, and popliteal spaces are uneven, and the pelvis may be tilted higher on the affected than on the normal side. Roentgenographic findings may not appear until 3 months of age or later.

A dysplastic or partially dislocated hip may become normal without treatment. However, treatment is advisable as soon as diagnosis is made. A simple Frejka splint is usually sufficient, but older children with luxation need casts.

Calcaneovalgus is a precursor to flatfoot if the abnormality is severe. By the fifth or sixth day, severe deformity shows calcaneous position with the top of the foot in close relationship to the anterolateral aspect of the leg, resistance to extension of the ankle, a small concavity in front of the lateral malleolus on extension of the foot, and a tendency toward external rotation of the entire limb. Treatment should be started at once.

Both *equinovarus* and *metatarsus varus* can be recognized in the newborn and should be treated immediately.

AFTER THE FIRST YEAR

Abnormalities of the lower thoracic, lumbar, or sacral parts of the spine are numerous and are usually associated with spina bifida occulta or hemivertebra. The symptoms are mainly progressive neurologic or orthopedic defects of the lower extremities. Investigation should be made to decide if exploratory laminectomy is required.

Coxa plana, Legg-Perthes' disease, usually occurs between 4 and 10 years of age. Slight limp is the first and commonest symptom, followed by pain which is referred to the groin, inner aspect of the thigh, or about the knee and increases with activity and is relieved by rest. Limitation and pain at the extremes of motion of the thigh are the most important signs.

Treatment should be started early and involves prevention of weightbearing.

Female Vesical Neck Obstruction

CHARLES PIERRE MATHÉ, M.D.
San Francisco

*Early treatment for obstruction of the female vesical neck is necessary to prevent irreversible damage to the kidneys and lower urinary tract.**

MANY factors of either extrinsic or intrinsic origin can be responsible for obstruction of the vesical neck in females. The intrinsic obstructions may be classified as neurogenic, as congenital malformations, or as changes due to disease (see table).

TYPES OF OBSTRUCTION

EXTRINSIC

- Bladder tumor
- Bladder calculus
- Ureterocele
- Cystocele
- Foreign body
- Tumor in adjacent area

INTRINSIC

Neurogenic

- Disease of the central nervous system
- Diffuse cerebral lesion
- Encephalitis
- Multiple sclerosis
- Transverse lesion of the spinal cord
- Spinal meningitis
- Transverse myelitis
- Spina bifida occulta
- Syringomyelia
- Tabes dorsalis

Congenital malformation

- Contracture of vesical neck
- Valves—posterior portion of urethra
- Hypertrophy of trigone

Anatomic changes due to disease

- Hypertrophy of vesical neck
- Hypertrophy of trigone
- Contracture of vesical neck, inflammatory
- Female prostate
- Polypoid formation
- Enfolding collarette
- Granulation tissue
- Infected glands
- Cyst
- Malignant tumor
- Prolapse of vesical neck

DIAGNOSIS

Constant residual urine is the most important diagnostic sign. Patients strain to void and have the feeling of incomplete bladder evacuation. Cystocele may coexist but rarely causes retention. Size and projection of the urinary stream are diminished. Bladder pain, suprapubic ache, ureteral cramps from back pressure, and dyspareunia frequently occur. The condition is often mistaken for hysteria, cystocele, or disease of the uterus, adnexa, abdominal organs, or kidneys.

Patients with urethral stricture have similar symptoms but no residual urine and are relieved by dilation. Occasionally, stricture and obstruction coexist, requiring separate treatment.

*Vesical neck obstruction in the female. J. Internat. Coll. Surgeons 21:146-159, 1954.

In advanced stages of obstruction, complete retention of urine and overflow incontinence are common, and patients may become comatose and uremic.

Although results of urinalysis are often negative, the typical back pressure changes, as manifested by hydroureter and hydronephrosis, suggest the disease process. Back pressure changes include hypertrophy of the trigone, trabeculations, and cellules and diverticula.

The obstruction is often overlooked in examination of the bladder with the commonly used right-angle cystoscope, whereas a cystourethroscope permits visualization of the actual obstruction. Contracture of the neck is seen in the form of a concave ridge forming the bar, and the narrow neck closely hugs the cystourethroscope as the instrument passes into the bladder.

If the patient is requested to void, the diseased neck does not open normally but will be seen as an irregular, rigid structure. An exploring finger in the vagina palpates a thickening about the bladder neck during instrumentation.

TREATMENT

For early contractures, progressive dilations up to 30 to 35 Charrière once or twice a week may sometimes give relief. Obstructing polyps, infected glands and cysts of the posterior urethra, and granulation tissue are destroyed with electrocoagulation after preliminary biopsy.

More advanced or unresponsive lesions causing neck obstruction are treated by transurethral resection. In some cases, resection must be repeated once or twice.

The complication of urethrovaginal fistula can be avoided by not removing too much tissue during the first resection and by employing a low coagulating current.

If the resectoscope cannot be passed, open supra- or retropubic resection of the vesical neck is done.

Intravenous Pentothal, supplemented by the usual oxygen, carbon dioxide, ether, and so on, is the preferred anesthesia. Relaxation is so complete with spinal anesthesia that injury may occur when resecting an obstruction which has fallen away from the operative site.

¶ NONSPECIFIC URETHRITIS IN WOMEN usually subsides within one to thirteen days upon local treatment with nitrofurazone (Furacin). While benefit results from instillation into the bladder of a 1:10 saline solution of the drug, Vernon H. Youngblood, M.D., of Cabarrus Memorial Hospital, Concord, N. C., finds that therapy is facilitated by daily use of self-insertable Furacin suppositories containing 0.2% of the medicament and 2% diperodon hydrochloride. Symptoms disappeared entirely in 28 and diminished in 12 of 40 patients; only 3 patients required therapy for more than two weeks. Sensitivity is controlled by discontinuing medication and applying Pyribenzamine ointment.

J. Urol. 70:926-929, 1953.

Repair of Eardrum Perforations

WILLIAM J. SCHRIMPF, M.D.
Cincinnati

*Human chorionic membrane may be used for closure of a perforated tympanic membrane.**

PARS tensa perforations are particularly amenable to closure by specially prepared amniotic membrane. The transparent, tough, thin, and slightly elastic chorionic side of the membrane has strong adhesive properties.

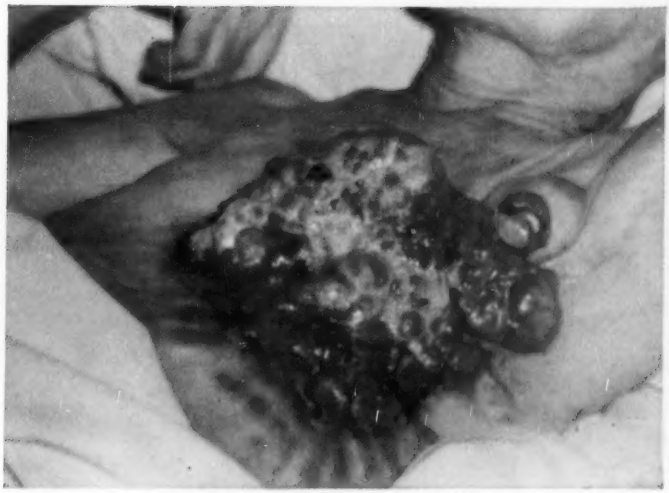
The patient's ear must be free of drainage and infection for at least two weeks before repair is attempted. All cerumen and desquamating epithelium is removed from the ear canal by small pieces of cotton wound on a thin, malleable, copper wire probe. A tampon of sterile cotton is saturated with 10% cocaine hydrochloride in equal parts of 95% ethyl alcohol and aniline oil (Grey's solution) and placed in the canal against the drum skin for ten minutes. The solution sterilizes the canal, anesthetizes the tympanic membrane, and creates a desirable hyperemia of the drum head and surrounding areas.

About 3 mm. of the tip of a fine probe is tightly wrapped with cotton and dipped into a solution of 50% trichloracetic acid. Excess acid is removed by touching the probe to a fine piece of gauze. Then, protecting most of the canal with a metal speculum, the edges of the perforation are touched with the acid to produce about 0.5 mm. of whitened margin around the entire circumference of the perforation.

A proper-sized disk of amniotic membrane is picked up with an applicator of No. 24 steel wire. The instrument is about 10 cm. long, and the end is fashioned into a loop and bent at right angles. The loop is sterilized in the flame of an alcohol lamp and dipped into sterile mineral oil for adhesiveness. The largest possible metal speculum is introduced into the canal, and, under direct vision, the disk is carefully guided through the speculum and placed over the perforation with the sticky mesodermal surface against the tympanic membrane. The patient senses complete occlusion at once with increased comfort. Improvement in hearing is also noted.

Closure was attempted in 53 patients between 3 and 60 years of age, and was successful in 48. Time necessary for closure varied between one and thirty weeks. Some small perforations healed with little scarring, and differences in transparency or pressure resistance were seldom evident.

*Repair of tympanic membrane perforations with human amniotic membrane. Ann. Otol. Rhin. & Laryng. 53:101-115, 1954.



January 1952. Untreated carcinoma of the breast of at least six years' duration as seen on admission to the hospital

A CASE REPORT

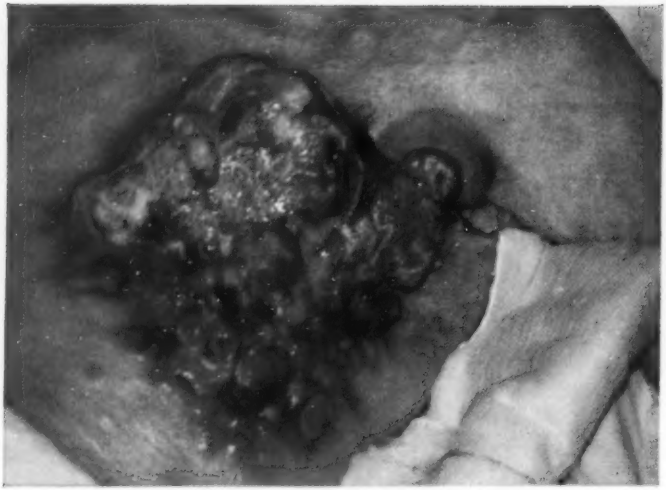
Untreated Breast Carcinoma

ORVILLE S. WALTERS, M.D.
Topeka, Kan.

Prepared for Modern Medicine

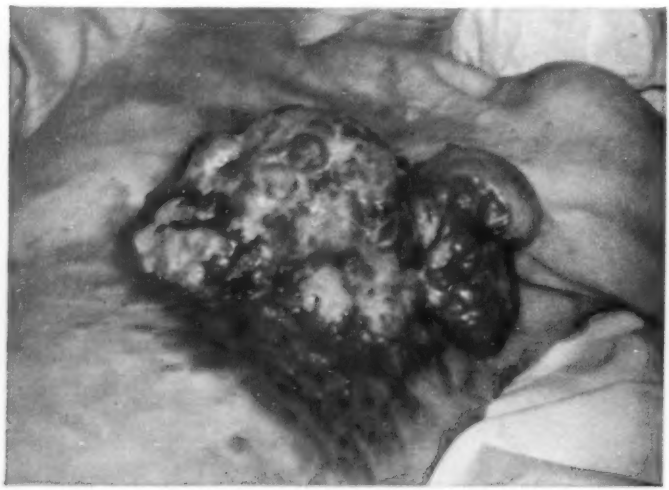
An 80-year-old unmarried business woman came for advice concerning the care of a cancer of the right breast which had become troublesome because of a foul odor and profuse exudate. By recalling a trip to Colorado during which she had to apply dressings, the patient was able to establish the known existence of the tumor at six years. How long it had been present before that time she could not remember.

Because of her religious convictions, the patient had never received any form of medical treatment. Her religious advisers had counseled her simply to keep clean dressings on the ulcerating area. She now felt she needed professional counsel re-



April 1952. Extension to axilla

garding care, but desired no treatment. For several months after the first consultation, the patient employed a mild deodorant. Finally she decided to enter the hospital because the profuse serous exudate required changes of dressings several times daily.



September 1952. Continued axillary growth

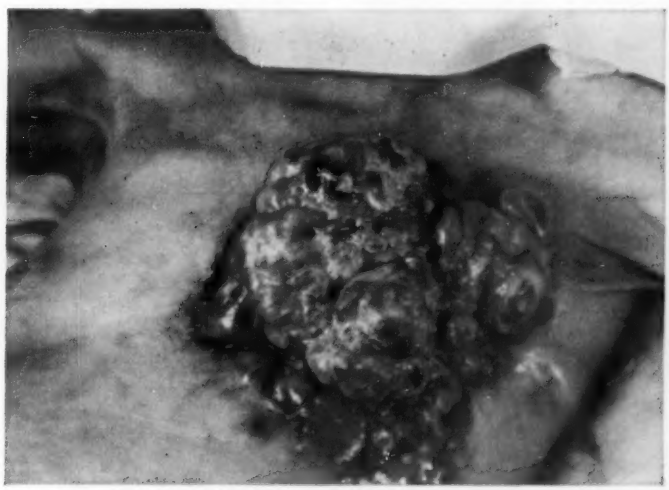
At the time of admission to the hospital on January 2, 1952 she was ambulatory, cheerful, and alert, had an excellent appetite, and characterized herself as "a going concern." Her only complaint during the period of hospitalization was persistent weakness. At her request, the hospital laboratory admission procedures were omitted. She left the hospital frequently for automobile rides and meals with relatives. She was ambulatory until two days before her death and never complained of pain. The only treatment was a vitamin supplement and 4 blood transfusions of 500 cc. each.

The patient's weight changed little during the first year of hospitalization. On January 5, 1953 she weighed 84 lb., and her weight increased to 95 lb. by February 16. On March 5 she weighed 100 lb., and ascites was severe. Two days before her death, the patient did not leave her bed as usual. She became increasingly dyspneic and cyanotic and was comatose several hours before death. She expired March 13, 1953 at the age of 82. The known duration of the tumor exceeded seven years.

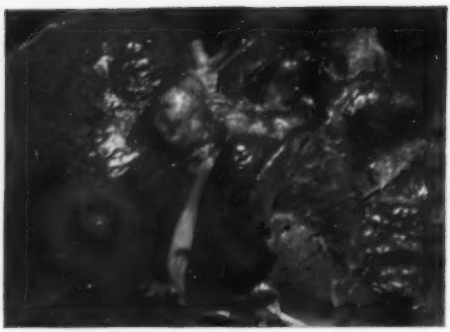
Erythrocyte and hemoglobin changes were:

Apr. 5, 1952	RBC 2,860,000 55% (Haden-Hausser)
Apr. 14, 1952	2 whole blood transfusions of 500 cc. each
Apr. 16, 1952	RBC 3,880,000 72%
May 31, 1952	RBC 3,440,000 55%
July 1, 1952	2 whole blood transfusions of 500 cc. each
July 3, 1952	RBC 3,640,000 74%
Feb. 6, 1953	RBC 2,820,000 58%
Mar. 11, 1953	RBC 2,510,000 52%

At autopsy the right breast showed a neoplastic mass 11 by 9 cm. in maximum dimension with direct extension downward and laterally. The left breast contained a mass 3 cm. in diameter and several smaller nodular masses.



January 1953. Patient died two months after this picture was taken.



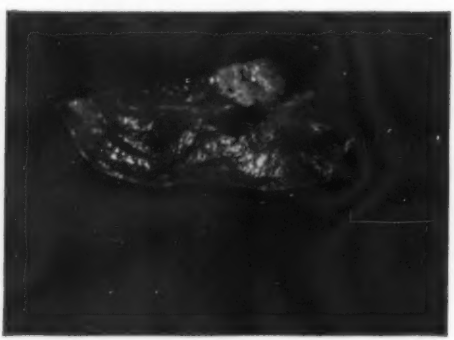
Liver had a solitary nodule on superior border at autopsy.

Approximately 200 cc. of serosanguineous fluid was found in the pleural cavities. Massive and band adhesions were found in both pleural cavities. The lungs were hyperemic and atelectatic, with several yellowish nodules 2 to 3 mm. in size scattered over all the lobes; 2 metastatic nodules 2 cm. in diameter were found on the upper and middle lobes of the right lung. The mediastinal lymph nodes were hypertrophic. The heart and great vessels showed no abnormality. The coronaries were sclerotic but not occluded.

The liver was 2 cm. below the costal margin and showed a solitary nodule 2.5 cm. in diameter on the superior border. Serosanguineous fluid, 1.5 liters, was present in the peritoneal cavity. The mesenteric lymph nodes were hypertrophic; the large and small intestines were matted together by neoplastic nodules. The spleen weighed 110 gm., and the cut section showed metastatic nodules averaging 2 mm. in maximum dimension.

The mucosa of the stomach and duodenum were normal, but the serosa showed numerous nodules 1 to 2 mm. in size. Such nodules were also found under the capsule of the kidneys and in cut section. The wall of the bladder also was dotted with very small nodules.

Microscopically, the tumor demonstrated a pattern of adenocarcinoma wherever found. In some areas, acinar formation could not be seen. Individual cells showed a moderate degree of anaplasia. Necrosis and secondary infection were present in some areas. The liver showed passive hyperemia, lipoidosis, and widespread metastatic carcinoma. Most sections of the lymph nodes were almost completely destroyed by metastatic carcinoma.



Spleen had metastatic nodules at autopsy.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Signs for Therapeutic Abortion*

QUESTION: When should therapeutic abortion be done?

Comment invited from

L. B. WINKELSTEIN, M.D.
ALEXANDER H. ROSENTHAL, M.D.
KEITH P. RUSSELL, M.D.
CHARLES L. SULLIVAN, M.D.
WILLIAM F. FINN, M.D.
W. G. ELIASBERG, M.D.
PETER M. MURRAY, M.D.
EDMUND W. OVERSTREET, M.D.

► TO THE EDITORS: The discussion of the indications for therapeutic abortion by Dr. W. N. Thornton, Jr., leaves little to be added. Surgical abortion involves not only many sociologic and religious problems, but also keen medical judgment.

It is becoming more evident that medical indications for therapeutic abortion are rapidly decreasing as our knowledge of treatment of such conditions increases. Many experts have reached the conclusion that the abortion itself is as traumatic to the patient as is the actual prenatal period and delivery.

Although each case must be considered on its own merits, tuberculosis and cardiac and hypertensive disease are, in many instances, no longer considered sufficiently valid reasons for interruption of pregnancy. However, German measles, when contracted in the first trimester of pregnancy, must be added to the narrowing list. Psychiatric disorders, when proved to be severe and preexistent, extreme cardiac malfunction, and serious renal damage are becoming the only true and valid reasons for therapeutic abortion, and then only when the life of the mother is definitely endangered by continuation of the pregnancy.

For the protection of the physician and the surgeon, as well as of the patient, therapeutic abortion should be done only in approved hospitals after consultation with, and written permission of, at least two medical specialists in the field for which the abortion is to be done.

L. B. WINKELSTEIN, M.D.
Mount Vernon, N.Y.

► TO THE EDITORS: Indications for therapeutic abortion have become so limited that today the large general hospital often will have no more than 1 such case a year. The outstanding maternal indication is severe impairment of renal function or renal insufficiency, as, for example, in a patient who has one

*MODERN MEDICINE, Mar. 15, 1954, p. 107.

kidney which is the site of hydronephrosis.

Severe heart disease is considered by many as an indication for therapeutic abortion, but there is increasing evidence that with adequate care, including complete bed rest, this indication is decreasing. It is generally stated that there is no indication for therapeutic abortion in the patient who has tuberculosis, but in a rare instance of marked tuberculous disease of the lungs, and an early pregnancy causing persistent vomiting, therapeutic abortion may be indicated. In regard to neuropsychiatric indication, it would appear that more evidence is necessary than is present at this time to justify many of the therapeutic abortions done for this type of disorder.

Two fetal indications have recently been stated to justify the procedure: [1] a succession of erythroblastotic stillbirths and [2] German measles during the first trimester of pregnancy. However, until the law recognizes these indications in all the states of the Union, further discussion seems unnecessary.

ALEXANDER H. ROSENTHAL, M.D.
New York City

► TO THE EDITORS: In general, we feel that the indications for therapeutic abortion are quite limited, being paramount in the renal-hypertensive group of patients and of occasional need in the cardiac and psychiatric groups.

The California Hospital, Los Angeles, was one of the first to utilize a review board for the evaluation of patients presented for therapeutic abortion in an effort to clarify the basic indications. The use of this board has proved exceedingly valuable in the proper disposition of patients whose pregnancies are complicated in the first trimester. The board has had the effect of reducing by more than one-half the incidence of therapeutic abortion in this hospital. A hospital with a therapeutic abortion ratio greater than 1 per 300 deliveries should require a more careful examination of cases presented for termination *(West. J. Surg.* 60:501-502, 1952).

In general, the views expressed by Dr. Thornton in his article show striking similarity to our previously published studies of this problem.

KEITH P. RUSSELL, M.D.
Los Angeles

► TO THE EDITORS: The need for therapeutic abortion, that bizarre miscreant on the totem pole of human aberration, misnamed and misapplied, has never been medically substantiated; such a procedure, therefore, is never indicated. Labeled therapeutic for convenience, it is in reality pseudoprophylactic. What real prophylactic procedure costing human life is tenable?

The variance of its nebulous incidence, from 0.2 to 7.3 per 1,000, strongly suggests its utilization in the alley of medical escapism and frustration but primarily on the broad avenue of socioeconomic meanderings. Heffernan and Lynch, in a well-documented study, have

shown the procedure to be nonproductive and contrary to all dedicated concepts of medical practice.

A philosophy which actively embraces failure is not one contributing to the advance of modern medicine (*Am. J. Obst. & Gynec.* 66:335-345, 1953).

CHARLES L. SULLIVAN, M.D.
Brookline, Mass.

► TO THE EDITORS: The determination of the necessity for therapeutic abortion is influenced by several factors. Need for the procedure indicates failure on the part of a doctor to instruct a patient concerning the dangers of pregnancy superimposed upon her already existing disease. All of us have seen patients with severe heart disease who were given digitalis but never contraceptive advice.

Medical conditions which formerly necessitated interruption of pregnancy can now be successfully treated by more specific therapy. Pyelitis has yielded to sulfonamides, while pernicious vomiting with electrolyte imbalance and acetonuria now responds to intravenous injections.

A corollary of the above is that treatment should be directed to the disease, rather than toward the pregnancy. It is more logical to perform a radical mastectomy for breast cancer during a pregnancy than to interrupt the pregnancy or to perform a lobectomy for tuberculosis than to terminate the pregnancy.

Proof that termination of pregnancy prolongs the life of the mother is difficult when the natural life history of her disease is determined regardless of pregnancy.

The above considerations have led all obstetricians to perform fewer therapeutic abortions. The chief maternal indications at present are severe renal or hypertensive disease and severe cardiac disease with previous decompensation. Whether the procedure should be done for fetal indications is debatable. About the only indication of this nature is verified German measles during the first twelve weeks of pregnancy in view of the 25 to 50% incidence of serious fetal anomalies as a result.

Hospital authorities have found a therapeutic abortion committee to be of increasing value. This ought to consist of obstetrician-gynecologists since theirs is the ultimate responsibility in performing therapeutic abortions. This committee assesses the evidence presented by the obstetrician and the other consultants and then reaches a decision.

WILLIAM F. FINN, M.D.
New York City

► TO THE EDITORS: Obstetricians, internists, and psychiatrists are agreed on the fact that the indications for interruption of pregnancy veer more and more from internal and gynecologic conditions to mental pathology. Dr. Thornton has outlined this in his article.

If we omit severe hereditary neurologic diseases, such as Sachs Tay amaurosis, mongolism, and tabes, and limit ourselves to mental dis-

ease in the narrower sense, we must add to the indications of schizophrenia, which should be made use of in a liberal way, the special indication of suicide. It may constitute a complication of manic-depressive psychosis, compulsion neurosis, and anxiety neurosis, to name only a few of the conditions. The correct diagnosis of potential suicide has therefore become an important consideration.

The following conditions are to be considered:

- Psychologic and psychopathologic factors
- Interpersonal relationships with husband, previous children, relatives, and neighbors
- Cultural, social, and economic implications, both tangible and abstract

Clinical psychologic factors, such as suicidal configurations in the Rorschach, association experiment, and others, should be used, whenever possible, to buttress the diagnosis.

Interpersonal relationships and cultural, social, and economic factors do not in themselves contain lawful indications, but a thorough investigation, together with a life history, will enable the psychiatrist, in consultation with the obstetrician or the general practitioner, to evaluate signs of severe maladjustment and suicidal responses.

In certain cases a typical course is found: The patient is elated during pregnancy and becomes deeply depressed and suicidal within three weeks after childbirth. If such a condition has been observed repeatedly, especially among siblings, this should be taken as an indication for therapeutic abortion.

In other cases feticidal and suicidal tendencies are combined during pregnancy. I have recently reviewed 10 such cases. It may be mentioned that hyperemesis gravidarum also may yield to phychoanalytic approach.

In a high percentage of cases, psychiatric difficulties in pregnancy are amenable to psychotherapy and psychoanalysis. Calling in the psychiatrist does not mean the death knell for the unborn child.

Both by relieving the conflicts of the woman who should continue her pregnancy and by stating psychiatric indications for interruption, psychiatry can channel away from the abortion mills a considerable number of unfortunate prospects.

W. G. ELIASBERG, M.D.
New York City

► TO THE EDITORS: The problem of the need for therapeutic interruption of pregnancy will probably always be with us. Careful consideration should be given to all the factors entering the case, and permission for each interruption should be granted only after careful evaluation of these factors with the utmost objectivity by a group with wide clinical experience.

In the Sydenham Hospital, the following procedure is rigidly observed:

- Recommendation by the referring physician
- Support of this recommendation, in writing, by one or more consulting specialists

• Written approval after review of entire case by director of service in which the indication lies
• Written approval of the director of obstetric and gynecologic service
• Written approval of medical superintendent of hospital

When the case under consideration is on ward service, written recommendation of the attending physician in charge of service may be substituted for the first two steps in the above outline.

Each case should be judged individually. Some cases might be promptly placed in the category of those gaining approval.

Changing conditions, greater understanding of the pathology involved, and improvement in our methods of management of various conditions will inevitably change our attitude toward some conditions which today seem to merit favorable consideration.

Like the poor, we will always have this problem with us. We should always make this decision in a way that will leave us with clear consciences.

PETER M. MURRAY, M.D.
New York City

► TO THE EDITORS: The answer to the question of therapeutic abortion is influenced, first of all, by our legal statutes. The laws of most states, like that of California, permit therapeutic interruption of pregnancy when "necessary to preserve her [the mother's] life." A few states specifically mention risk to maternal health, and in most states such a risk has been interpreted as an *eventual* threat to maternal life.

The fact is that most therapeutic abortions at present are done on grounds of health impairment. Very few patients who refuse urgently indicated therapeutic abortions actually die from the effects of pregnancy. So the principal problem today is to decide when a complication constitutes a great enough risk to maternal health to warrant interruption.

Such a decision is always influenced by the current thought of any community. In some, the public frowns, on religious and moral grounds, upon therapeutic abortion even for extreme maternal risks. In most, the public has steadily become more liberal in its attitude and has demanded interruption of pregnancy for smaller and smaller maternal risks. Indeed, public opinion has gone beyond the written law—which is always slow to catch up — and has demanded therapeutic abortion for fetal indications. For the most part the public is unwilling to have women continue with pregnancies which seem reasonably likely to produce seriously damaged offspring.

Despite this liberalization of indications, the actual necessity for performing therapeutic abortion is steadily decreasing. This is the result, of course, of progressively more effective treatment of the various complications of pregnancy which at one time threatened maternal life and health. As they have come more under control, the aggravating effect of pregnancy upon them has steadily decreased.

While the hypertensive disorders continue to be a major reason for therapeutic abortion, heart disease is less and less frequently an indication and pulmonary disease has almost dropped out. Neurologic and urologic diseases run along at a rather constant level. Incidental surgical and gynecologic conditions are so much better handled today that interrruption of pregnancy is rarely required.

Two reasons rapidly coming to the fore are fetal indications and psychiatric disease. Physicians in general, and the public as well, have been slow to accept mental disturbance as a true disease entity; they have also been slow to recognize the deleterious influence of pregnancy in certain types. But this is rapidly changing today, and we may expect to see an increasing number of therapeutic abortions carried out for well-justified psychiatric indications.

EDMUND W. OVERSTREET, M.D.
San Francisco

Surgical Treatment of Hypertension*

QUESTION: Does subtotal or total adrenalectomy improve results of sympathectomy for hypertension?

Comment invited from

J. HARTWELL HARRISON, M.D.
G. DE TAKATS, M.D.
JOHN H. BESSON, M.D.
SIBLEY W. HOOBLER, M.D.

► TO THE EDITORS: The splendid study of Drs. William A. Jeffers, Harold A. Zintel, Joseph H. Hafkenschiel, A. Gorman Hills, Alfred M. Sellers, and Charles C. Wolferth indicates that total or subtotal adrenalectomy combined with sympathectomy is apparently the most effective surgical procedure for hypertension. In comparing the results in our study of total adrenalectomy for malignant vascular disease, it seems that the addition of the sympathectomy has yielded an increment of improvement beyond that of total adrenalectomy alone.

It is to be remembered that this form of surgical therapy is applicable only to selected patients. The measurable benefits in our cases have been on the basis of a sodium and water diuresis, and consequently the best results have been obtained in those patients with dyspnea, congestive failure, and increasing intracerebral symptoms. Only patients in whom medical therapy has failed should be selected, and surgery is not advisable when renal function is poor.

If the renal reserve is low, the patient will progress to a greater degree of renal insufficiency after surgical intervention. This we have attributed to the renal arterial vasoconstriction pursuant to surgery.

On the basis of our experience, we believe that adrenalectomy for hypertension should be total rather than subtotal. Of our original 12 patients, 5 have lived more than three years since total adrenalectomy and 4 of these are leading sedentary lives and are self-supporting.

The 2-stage operation is preferable for the severe hypertensive patient. Maintenance cortisone dosage is usually 37.5 mg. daily with

*MODERN MEDICINE, Mar. 1, 1954, p. 93.

New study confirms T. E. D. Elastic Stocking Routine SAVES LIVES

In a study of 9,917 hospital patients, the expected incidence of fatal pulmonary embolism was reduced by 65% at a cost of about 2½¢ per bed per day.

In new studies at Massachusetts Memorial Hospitals, T.E.D. Elastic Stockings were applied routinely to *all* adult patients (except in cases of ischemic vascular disease of the legs in which the use of the stockings is contraindicated). Data on the incidence of pulmonary embolism was carefully compiled and interpreted.

The result was a 65% reduction in the incidence of fatal pulmonary embolism.

Since most fatal emboli originate in the deep calf veins of the legs, usually as a result of the circulatory stasis incident to bed rest, prophylaxis is easily accomplished by the use of T.E.D. elastic stockings. These stockings, developed by Bauer & Black, speed blood flow and minimize clot propagation.

A complete report of the above study appeared in the New England Journal of Medicine. You may obtain a reprint for your files by writing to Bauer & Black Research Laboratories, 309 West Jackson Boulevard, Chicago 6, Illinois.

Specimen of deep calf veins opened to show ante mortem clot filling peroneal and posterior tibial veins. From such clots fatal and non-fatal pulmonary emboli result. *(Specimen photograph courtesy of Joseph R. Stanton, M.D., Massachusetts Memorial Hospitals and Boston University School of Medicine.)*

COST OF T. E. D. STOCKINGS AVERAGES LESS THAN 2½¢ PER BED PER DAY

The quantity price of T.E.D. Elastic Stockings is only $2.45 per pair. When you furnish 3 pairs per active bed per year the cost averages only 2½ cents per day.

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increments to meet periods of stress such as intercurrent infection and increased activity. Maintenance sodium chloride and desoxycorticosterone acetate is a highly individual matter and the levels must be worked out for each patient.

The group at Peter Bent Brigham Hospital working with Dr. George W. Thorn have not used the combined adrenalectomy and sympathectomy. We should continue our study and evaluation of the effects of total adrenalectomy for comparison purposes and at the same time should approve and also investigate the added benefits to be obtained from the addition of sympathectomy.

J. HARTWELL HARRISON, M.D.
Boston

► TO THE EDITORS: The adrenal factor in hypertension has been of great interest to our group *(Surgery* 26:67, 1949) and I have been convinced that the neurogenic, renal, and adrenal components in the production of diastolic hypertension can be readily estimated in the individual patient.

Unquestionably, there is a group of hypertensive patients, mostly middle-aged, obese women nearing or in the menopause, who exhibit insulin resistance and other characteristics although not the full-blown picture of a Cushing syndrome. In such patients, a reduction of the adrenal cortex to one-quarter of the gland on one side with complete removal on the other brings about a remarkable change in the appearance, psychic reactions, and level of blood pressure. In fact, these patients can be regarded as having a pseudo-Cushing's syndrome and subtotal adrenalectomy is specific here, while dorsolumbar sympathectomy with splanchnicectomy is followed by negative results or an early recurrence *(Angiology* 1:547, 1950).

However, these cases are far and between among the essential hypertensive patients. In our last review of sympathectomy for diastolic hypertension in 562 patients *(J.A.M.A.* 148:1382, 1952), only a few patients and mostly those exhibiting a cortical adenoma were found to belong to this group. The question which Dr. Jeffers and his associates have raised is whether all essential hypertensive patients who are selected for surgery should have a total or a subtotal adrenalectomy combined with a subdiaphragmatic splanchnic nerve section.

Since the limiting factor in obtaining results from splanchnicectomy in essential hypertension is the extent of bilateral nephrosclerosis, one has hoped that bilateral adrenalectomy would allow operation on such patients who have impaired concentrating ability of the urine. Nevertheless, we hear in this report that adrenalectomy is not advisable when less than 20% of injected phenolsulfonphthalein is excreted in fifteen minutes; this rule excludes exactly the type of patient for whom one would like to extend the limit of operability.

While splanchnicectomy in our hands has a mortality of less than 1%, 24% died after adrenalecto-

(Continued on page 132)

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And in a balanced relationship of protein, vitamins, minerals and other nutrients. See chart below.

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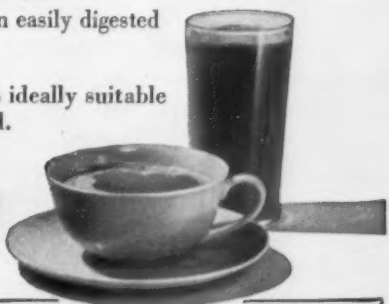
Thus Ovaltine made with milk is ideally suitable whenever a bland diet is required.

Ovaltine is equally delicious served hot or cold.



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The World's Most Popular Fortified Food Beverage

Three Servings of Ovaltine in Milk Recommended for Daily Use Provide the Following Amounts of Nutrients
(Each serving made of ½ oz. of Ovaltine and 8 fl. oz. of whole milk)

MINERALS				VITAMINS			
*CALCIUM	1.12 Gm.	MAGNESIUM	120 mg.	*ASCORBIC ACID	37.0 mg.	*THIAMINE	1.2 mg.
CHLORINE	900 mg.	MANGANESE	0.4 mg.	BIOTIN	0.03 mg.	*VITAMIN A	3200 I.U.
COBALT	0.006 mg.	*PHOSPHORUS	940 mg.	CHOLINE	200 mg.	VITAMIN B_{12}	0.005 mg.
*COPPER	0.7 mg.	POTASSIUM	1300 mg.	FOLIC ACID	0.05 mg.	*VITAMIN D	420 I.U.
FLUORINE	0.5 mg.	SODIUM	560 mg.	*NIACIN	6.7 mg.	*CARBOHYDRATE	65 Gm.
*IODINE	0.7 mg.	ZINC	2.6 mg.	PANTOTHENIC ACID	3.0 mg.	*PROTEIN (biologically complete)	32 Gm.
*IRON	12 mg.			PYRIDOXINE	0.6 mg.	*FAT	30 Gm.
				*RIBOFLAVIN	2.0 mg.		

*Nutrients for which daily dietary allowances are recommended by the National Research Council.

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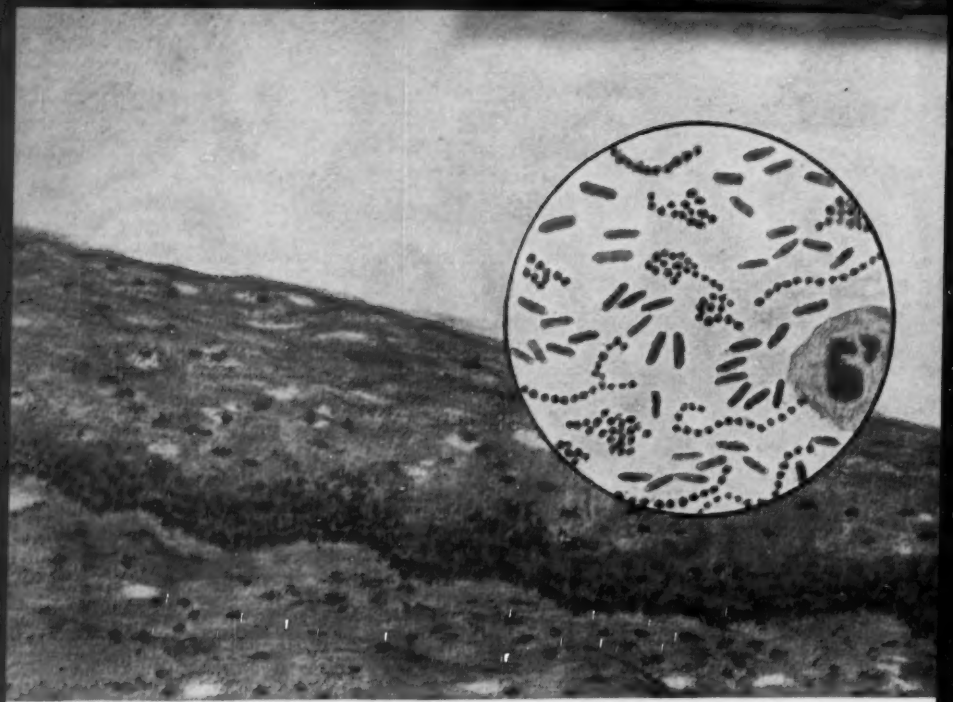
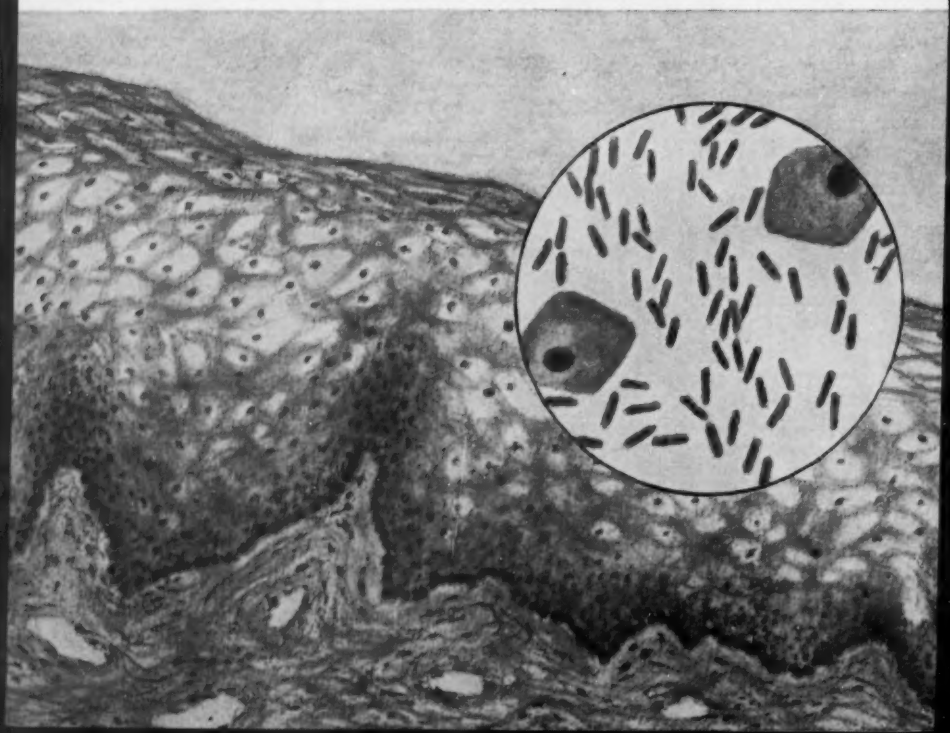


Above: Senile vaginal epithelium is low in glycogen, low in acid and (inset) low in protective Döderlein bacilli, encouraging growth of pathogens.

Below: Normal vaginal epithelium is high in g cogen, definitely acid and (inset) abundant Döderlein bacilli to combat pathogenic organisn



Restoring the Normal Acid Barrier to Trichomonal Vaginal Infection

To discourage multiplication of trichomonads and to encourage physiologic protection, a comprehensive therapeutic regimen with Floraquin® is instituted.

THE normal vagina, by reason of its acid reaction, is provided with a natural barrier against pathogenic microorganisms which require an alkaline medium. When the "acid barrier" is removed, a hypo-acid state results and growth of the protective, physiologic and nonpathogenic Döderlein bacilli is inhibited—to be replaced by such pathogenic organisms as the trichomonad, streptococcus, staphylococcus, colon bacillus and Monilia candida.

As infection develops, the epithelial cell layers, which normally number between forty-five and fifty-five, may decrease to as few as fifteen to twelve layers or may disappear entirely. With this loss of glycogen-bearing cell layers, the available carbohydrate released by physiologic desquamation into the vaginal secretion and ultimately converted into lactic acid is proportionately decreased.

Floraquin not only provides an effective trichomonacide (Diodoquin®), destructive to pathogenic organisms, but furnishes lactose, dextrose and boric acid for the reestablishment of the normal vaginal acidity and regrowth of the normal protective flora. G. D. Searle & Co., Research in the Service of Medicine.

my, a mortality far too high in a type of operation where results are never predictable. We are also very far from safe and effective substitution therapy in patients from all walks of life and under all circumstances. True enough, experimental hypertension and also human hypertension cannot be maintained in the absence of corticoadrenal function. But this function is so vital for the normal existence of man under varying forms of stress that we have not been able to observe the courageous course of the authors until better replacement therapy is available.

It should be remembered that even oral thyroid medication does not substitute too well for an innervated, intermittently discharging thyroid gland.

G. DE TAKATS, M.D.

Chicago

► TO THE EDITORS: Twenty years ago, the first George Crile thought he was doing everything surgically necessary for relief of hypertension by blindly reaching one hand into a hole in the loin and deftly plucking the celiac ganglion from its anatomic jungle.

As a general surgeon I feel that the proper subtotal gastric resection, eliminating as it does most of the autonomic nervous influence, is the answer to the surgical management of ulcer while vagotomy alone will not suffice. Likewise, I am sure that Dr. Jeffers and associates by moderate sympathectomy, at least denervating the adrenals and kidneys, combined with almost total adrenalectomy, are closest to achieving surgical relief of essential or malignant hypertension.

The clinician evaluating a candidate for sympathectomy hopes to discover a unilateral dysfunctioning kidney or possibly turn up an adrenal tumor, removal of either of which might well result in a perfect cure.

Up to now, the gradually extending sympathetic operations, even reaching to the top of the thorax, have been defeated by nature's insistence on reestablishing the sympathetic influence through the regeneration of the many ramifications and branches impossible to remove. Thus there usually ensues a gradual return of disability, comparable to my experience in the typical case of Mrs. E. P.

With all the symptoms and background one expects to find in a 48-year-old woman whose blood pressure runs 264/130, I did a double thoracolumbar sympathectomy, two weeks apart, in April 1949. The blood pressure and symptoms definitely improved, the patient returning to work as a machine operator for several months in 1950. In November 1951 the condition gradually worsened, with headaches and anginal symptoms increasing, until blood pressure, despite modern hypotensive therapy, reached 240/140, and the patient was bedridden much of the time.

A double adrenalectomy was done in December 1952 with immediate relief. It was our plan and our feeling that we totally removed every vestige of adrenal tissue.

The replacement management with daily dosage of cortisone and DOCA was greatly facilitated with the availability of Percorten, 1 intramuscular injection monthly, to supplant the DOCA. Indeed, only the present day ability to control the adrenalectomized

(Continued on page 136)

Gratifying relief from pain, frequency or urgency

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In a matter of minutes, PYRIDIUM provides a safe, local analgesic action that allays the harassing symptoms that accompany pyelonephritis, cystitis, prostatitis, and urethritis.

Since PYRIDIUM is compatible with sulfonamides and antibiotics, concomitant use with any of these agents affords both symptomatic relief and antibacterial action.

SUPPLIED: 0.1 Gm. (1½ gr.) tablets, in vials of 12 and bottles of 50, 500, 1000.

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The convalescent or "run-down" patient

feels better faster

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*The original, clinically proved cobalt-iron product.

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SUPPLIED:

Roncovite Tablets—enteric coated, red. Each contains cobalt chloride, 15 mg.; exsicc. ferrous sulfate, 0.2 Gm.; bottles of 100.
Dose: one tablet 4 times a day.

Roncovite Drops—each 0.6 cc. contains cobalt chloride, 40 mg.; ferrous sulfate, 75 mg.; bottles of 15 cc. with calibrated dropper.
Dose: 0.6 cc. daily.

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individual makes this surgery possible. During this period blood and urine electrolyte studies were made and found within normal range.

In October 1953, there was occasional complaint of precordial distress, with the blood pressure elevating to 230/120, forcing the question that if one is aiming to avoid adrenal influence, why not curtail these substances? Accordingly, Percorten was discontinued and the patient is now taking but 5 mg. of cortisone on alternate days. Since then the blood pressure has ranged from 180/100 to 190/100 and the patient is leading a comfortable existence. Except for gradually increasing generalized pigmentation of this woman's very fair skin, there is no other evidence of adrenal insufficiency.

JOHN H. BESSON, M.D.
Portland, Ore.

► TO THE EDITORS: From published reports it would appear that subtotal or total adrenalectomy does improve the results of an Adson type of sympathectomy for hypertension as far as reduction in blood pressure is concerned. It is less clear that the combined procedure described by Dr. Jeffers' group is superior to a more extensive sympathectomy.

Unfortunately, published data defy comparison owing to lack of uniformity in reporting results. If graphic representations of the individual pre- and postoperative blood pressures at a fixed time interval—for example, one year postoperatively—were recorded, more information could be used for comparative purposes. Using cases of Smithwick Grade IV only, the best comparative data that I have been able to find are as follows: Of 131 patients observed thirty-six months by Smithwick, the combined operative and postoperative mortality was 42.7%. In the Jeffers series of 52 cases, observed up to thirty-seven months, operative mortality was 8% and postoperative mortality 38%. Thus, while the apparent "cure" rate may be higher at present, the operation does not appear to have improved the survival rate of patients.

Postoperative deaths from adrenal insufficiency will undoubtedly occur in the years ahead. These deaths probably will render the comparison less favorable for adrenalectomy.

We prefer to submit our severely hypertensive patients first to sympathectomy or medical management. Only if these fail, do we consider adrenalectomy. Even though the two former procedures do not bring the blood pressure to normal, they often relieve the pressure sufficiently to prevent the cerebral and cardiac complications of the disease. It is unfortunate that renal failure constitutes a contraindication to adrenalectomy since the large proportion of treatment-resistant hypertensive patients are classified in this category.

We have done adrenalectomy in one patient who would have satisfied the criteria of Dr. Jeffers' group. It was impossible to lower his blood pressure significantly without producing hypoadrenalism and he died suddenly some months later, presumably of a cerebrovascular accident.

SIBLEY W. HOOBLER, M.D.
Ann Arbor, Mich.

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Once individual dosage has been established, it may be continued, with only rare exceptions, as the maintenance dosage.

VERALBA activates physiological reflex mechanisms which normally regulate blood pressure. There is no adrenergic or ganglionic blockade, no paralysis of vascular muscle, no disturbance of normal blood distribution or the body's curbs against postural hypotension.

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Supplied: Tablets of 0.2 mg. or 0.5 mg., uncoated and grooved, in bottles of 100 and 1000. Also as VERALBA Injection in 10-cc. multidose vials.

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ACHROMYCIN maintains effective potency for a full 24 hours in solution, and provides rapid diffusion in tissues and body fluids.

ACHROMYCIN is effective against beta hemolytic streptococcic infections, *E. coli* infections, meningococcic, staphylococcic, pneumococcic and gonococcic infections, acute bronchitis and bronchiolitis, pertussis and the atypical pneumonias, as well as virus-like and mixed infections.

CAPSULES: 50, 100, 250 mg. • PEDIATRIC DROPS: Cherry Flavored, 10 cc. vials, 100 mg. per cc., approximately 25 mg. per 5 drops • ORAL SUSPENSION: Cherry Flavored, 1 oz. vials, 250 mg. per teaspoonful (5 cc.) • TABLETS: 50, 100, 250 mg. • SPERSOIDS* Dispersible Powder: Chocolate Flavored, 12 and 25 dose bottles, 50 mg. per rounded teaspoonful (3 Gm.) • INTRAVENOUS: 100, 250, 500 mg. vials.

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Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-266

THE CLUE

ATTENDING M.D: Your opinion is sought concerning an 18-year-old girl in the Gynecology Department. She has never menstruated. Some sort of hypogonadism with primary amenorrhea seems to be involved. The patient is bright, has done well in school, and apparently has strong sexual feelings. She has had no operations. I think the most striking aspect of her external appearance is the "shieldlike" chest, pinpoint nipples, and fair pubic hair.

VISITING M.D: Does she have webbing of the skin of the neck? In 1933 Turner described webbing in such cases with cubitus valgus and infantilism. There's much literature on this subject, as you know. The question is . . .

PART II

VISITING M.D: *(Continuing)* is this a primary ovarian agenesis? There are two ways to find out: laparotomy or demonstration of increased pituitary gonadotropins, which exculpates the pituitary gland. However, the clinical syndrome is so typical as to be subject to diagnosis on sight.

ATTENDING M.D: Here's the patient's

room. *(They enter. The consultant examines the patient)*

VISITING M.D: Primary amenorrhea; a stocky, thickset, short girl with webbed short neck; lack of breast tissue, pinpoint nipples and minute, pale pink areolae.

ATTENDING M.D: How can you eliminate hypopituitarism?

VISITING M.D: Easily—individuals with hypopituitarism are truly dwarf rather than small. The hypopituitary patient is frail and delicate rather than stocky; complete lack of pubic hair is characteristic. The bone age is very retarded. I presume it was within normal limits in this instance?

ATTENDING M.D: Correct.

(Continued on page 144)

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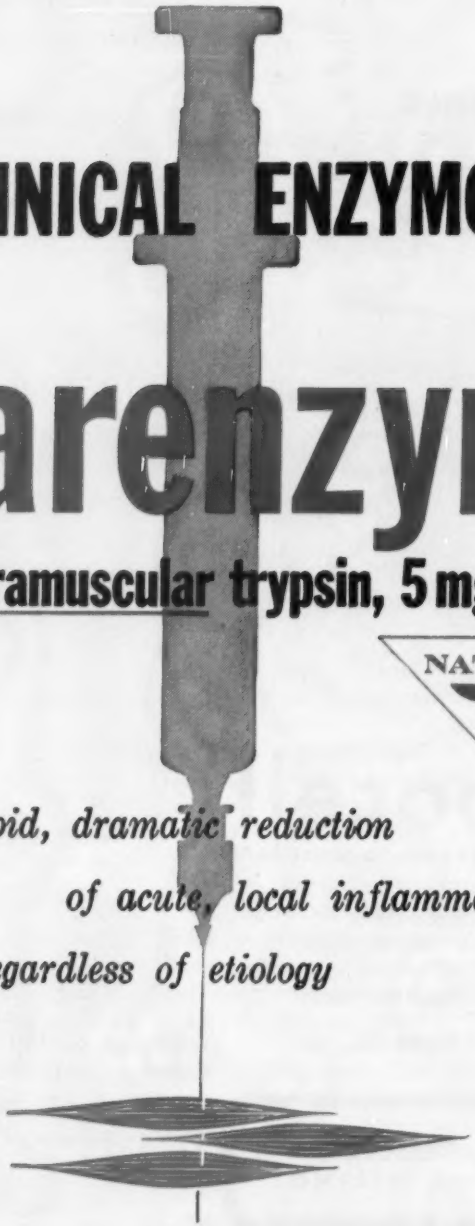
For rapid, dramatic reduction
of acute, local inflammation
regardless of etiology



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PARENZYME Catalyzes a Systemic Proteolytic Enzyme System.

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in *phlebitis, thrombophlebitis, phlebothrombosis*
in *iritis, iridocyclitis, chorioretinitis*
in *traumatic wounds*

PARENZYME has also proved effective in management of varicose and diabetic leg ulcers.

DOSAGE: *Initial Course:* 2.5 to 5 mg. (0.5 cc. to 1 cc.) of PARENZYME (INTRAMUSCULAR trypsin) injected deep intragluteally 1 to 4 times daily for 3 to 8 days. *Maintenance Therapy:* In chronic or recurrent diseases, 2.5 mg. once or twice a week may be required for maximum benefit.

Vials of 5 cc. (5 mg./cc.: crystalline trypsin in sesame oil), by prescription only. *Write for complete information.*

THE NATIONAL DRUG COMPANY *Philadelphia 44, Pa.*

VISITING M.D: In addition, the gonadotropin output is very low and the 17-ketosteroids are reduced with hypopituitarism. The gonadotropins in this case must be positive.

ATTENDING M.D: Urinary gonadotropin follicle-stimulating hormone reaction is positive at 110 mouse uterine units per twenty-four hours, and 17-ketosteroids were low, at 2.4 mg. per twenty-four hours.

VISITING M.D: Patients with hypopituitarism are extremely sensitive to insulin, so that only about one-fifth the ordinary amount should be used for an insulin tolerance test if this disease is suspected. In this case I expect the insulin tolerance to be normal.

ATTENDING M.D: That's correct.

VISITING M.D: Finally, estrogens do not produce secondary sexual alterations in hypopituitarism.

ATTENDING M.D: Do you think they would in this patient?

VISITING M.D: The proper combination of estrogens for a month should produce some growth and breast development.

VISITING M.D: *(Consultant returns to reexamining the patient)* Breast tissue is entirely absent. The patient's external genitalia and uterus are infantile. Blood pressure is normal. I would presume that uterine scrapings would produce no normal endometrium, but this is not necessary for the diagnosis.

PART III

VISITING M.D: And so this patient has typical congenital agonadism, called Turner's syndrome in the female. These patients, while sexually underdeveloped, are objectively female in habitus, organs, and inclinations, so that differentiation is independent of the embryonic gonad. Often other developmental abnormalities are associated, particularly those that involve the eye and aorta.

ATTENDING M.D: I don't see how ovarian defect can explain all the abnormalities.

VISITING M.D: The presence of a little pubic and axillary hair and urinary 17-ketosteroids in Turner's syndrome is ascribable with fair certainty to adrenal activity; but the cortical function is below normal, probably as a result of altered pituitary stimulation in the anovarian stage.

ATTENDING M.D: The adrenal cortex is the culprit and accounts for the decreased growth rate and the short stature of the patient. We should study the adrenal cortical function by circulating eosinophils and the urinary uric-acid/creatinine ratio determination before and after intramuscular injection of ACTH.

VISITING M.D: I think so.

ATTENDING M.D: Is Turner's syndrome ever found in the male?

VISITING M.D: In the female gonad, a single tissue, the graafian follicle, serves both endocrine and germinal functions. It is difficult to define the homologous condition in the male, because germinal tissue and the endocrine tissue are separate in the testes, but homologous cases with short stature and congenital anomalies have been reported as Turner's

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the patient
is in pain —

There is a new form of synthetic narcotic analgesic... less likely to produce constipation than morphine... indicated for relief of severe or intractable pain -- LEVO-DROMORAN® TARTRATE 'ROCHE'.

syndrome in the male. In one case a man with particularly well-developed muscles but very short in stature was called by his friends "Mr. Atlas." To speak of Turner's syndrome in the male is confusing.

PART IV

VISITING M.D: *(Continuing)* The important point to recognize is that all congenital hypogonadism is not of pituitary origin. The webbed neck, short stature, and female infantilism are unmistakable and give the physician the rare opportunity of a pathognomonic picture distinct from hypopituitarism and cretinism. The modern tests of adrenal function will reveal relatively normal reactions.

ATTENDING M.D: But what is the treatment?

VISITING M.D: Inasmuch as the primary deficiency is the lack of a hormone-producing organ for which we cannot substitute, we are left simply with substitution hormone therapy.

ATTENDING M.D: What about these associated anomalies you spoke of?

VISITING M.D: Usually squint, ptosis, cataract, occasional coarctation of the aorta, and mental defect.

ATTENDING M.D: Do you think we should do a laparotomy?

VISITING M.D: It is not necessary.

short REPORTS

Surgery

Plastic Drainage Tubes

Intraperitoneal drainage in rats is accomplished more adequately and safely with a plastic tube and filler than with the conventional Penrose drain and gauze filler. Drains made of a nonreactive plastic, Teflon, caused less adhesion formation and drained longer and more freely in the peritoneal cavity of rats than did similar rubber tubings, reports Dr. Frederick W. Pitts of the University of Pennsylvania, Philadelphia. The gauze-filled Teflon drains became blocked only when omentum or bowel adhered to the gauze at the end of the drain.

Proc. Soc. Exper. Biol. & Med. 85:404-406, 1954.

Enzymes

Trypsin for Inflammation

Intravenous administration of trypsin is valuable in the management of some inflammatory processes. The drug was administered to patients with chronic thrombophlebitis, severe bilateral cavitary tuberculosis, or terminal malignant disease, reports Dr. Mordant E. Peck of the University of Colorado, Denver. Inflammatory reaction associated with thrombophlebitis was significantly affected, and edema was reduced, skin excoriations healed, and color of the extremity improved. However, trypsin does not affect the basic anatomic defect of the inflammatory process, and sympathectomy or venous ligation must be done subsequently as indicated. Untoward side effects of trypsin therapy are not yet avoidable and include anorexia, nausea, abdominal cramps, vomiting, and aching pains. Although infrequent, emboli and thrombi are observed after infusion of trypsin into small veins of persons with fine, diffuse venous systems.

J.A.M.A. 154:1260-1263, 1954.

Pediatrics

Etiology of Diarrhea

Bacteriologic examinations of stool specimens from children with infectious diarrhea reveal a variety of organisms as the etiologic agents. Stool specimens from 1,374 children less than 2 years of age with infectious diarrhea were cultured, report Dr. Gabriel Araujo Valdivia and associates of Mexico. *Shigella* organisms were isolated in 15.4% of the specimens and *Salmonella* in 5.8%. Shigellosis and salmonellosis were indistinguishable without stool cultures. Coliform, paracolon, *Proteus*, *Pseudomonas*, and *Klebsiella* were recovered singly or mixed with *Shigella* or *Salmonella* organisms in the remaining 78.8%.

Quart. Rev. Pediat. 9:5-6, 1954.

3 days' treatment...

UNIFORMLY DEPENDABLE

AGE	SEX	Duration of Symptoms before ACTH	[illegible]	Total Dose (units)	Days of Treatment	Initial Improvement	Complete Relief	Remarks
11	F	24 hrs.	2[illegible]	200	3	48 hrs	96 hrs.	Gay &
26	M	48 hrs.	12[illegible]	125	3	48 hrs	96 hrs.	Gay &
48	F	96 hrs.	60	60	2	24 h[illegible]	72 hrs.	Gay &
[illegible]	M	72 hrs.	20[illegible]	200	3	24[illegible]	48 hrs.	Falk, Allen
[illegible]	M	5 days	1[illegible]	180	3	[illegible]	3½ days	& Bennet

IN POISON IVY

In contrast to customary measures, almost uniformly dependable improvement in poison ivy dermatitis is found when HP•ACTHAR *Gel* is used. HP•ACTHAR *Gel* is equally effective in dermatitis caused by poison oak. Suppression of the acute symptoms is gratifyingly quick and thorough, and the patient's agonizing condition is dramatically changed into one of relief and well-being.

Three days of treatment, implying a small total dose and economy, suffice as a rule.

References: 1. Flood, J. H.: Bull. Guthrie Clinic 21: 3, 1951. 2. Gay, L. N., and Murgatroyd, G. W., Jr.: J. Allergy 23: 215, 1952. 3. Falk, M. S., et al.: J. Invest. Dermat. 18: 307, 1952.

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Oncology

Spontaneous Tumor Regression

Although malignant neoplasms only occasionally regress spontaneously in man, the phenomenon is frequently observed in induced tumors in ducks. Squamous-cell carcinomas, hemangiomas, fibromas, and papillomas were produced in Pekin ducks by the local application of methylcholanthrene. Histologic examination of the neoplasms in all phases of regression showed that the process was associated with necrosis, lymphocytic infiltration, and increases in reticuloendothelial elements. Local accumulations of lymphocytes within the tumor may produce vascular obstruction and ischemia of the malignant tissue, suggests Dr. R. H. Rigdon of the University of Texas, Galveston. In addition, the dissolution may be influenced by an immunologic factor of the reticuloendothelial system.

South. M. J. 47:303-310, 1954.

Tuberculosis

Combined Isoniazid Therapy

Therapeutic value of isoniazid for pulmonary tuberculosis is increased equally by combined administration of either streptomycin or para-aminosalicylic acid (PAS). The U. S. Public Health Service cooperative investigation of antimicrobial therapy of tuberculosis reports that no greater therapeutic value results from simultaneous use of all 3 drugs. A group of cooperating hospitals administered the drugs in several combinations and doses to more than 1,600 patients. Dosages used were 3 or 10 mg. per kilogram of isoniazid daily combined with 10 to 12 gm. of PAS daily or 1 gm. of streptomycin twice weekly. The 3-mg. dose of isoniazid is preferred to the 10-mg. dose, since roentgenologic and bacteriologic improvement is not increased by the larger doses of isoniazid and toxic reactions become more frequent with higher dosages. The drugs may be alternated to prevent development of bacterial resistance.

Am. Rev. Tuberc. 69:1-12, 1954.

Drugs

Therapy for Syphilis

A single injection of Bicillin appears to be more satisfactory for treatment of early infectious syphilis than the administration of procaine penicillin G in aluminum monostearate. Dr. Clarence A. Smith of the U. S. Public Health Service, Washington, D. C., and associates report that 2,300,000 to 2,500,000 units of Bicillin (N,N'dibenzylethylenediamine dipenicillin G) given intramuscularly produced prolonged high blood levels of penicillin capable of controlling syphilis in most patients. Twelve to fifteen months after injection of the drug, re-treatment was necessary for only 5% and seronegativity was attained in 90% of 127 patients with dark-field positive primary or secondary syphilis. Treatment of 8 syphilitic women before or during pregnancy successfully prevented infection of the infants. Untoward side effects from the drug are rare.

Am. J. Syph., Gonor. & Ven. Dis. 38:136-142, 1954.

effective in 6 out of 7 cases of functional vomiting[1] . . . reduces gastrointestinal smooth muscle contractions physiologically . . . contains no antihistaminics, barbiturates, or other drugs . . . also useful in nausea of pregnancy, and for drug- or anesthetic-induced vomiting

IMPORTANT: EMETROL is stabilized at an optimal physiologic pH level. Dilution would upset this careful balance. For this reason, EMETROL is always taken straight, and no fluids of any kind are allowed for at least 15 minutes after administration.

1. Bradley, J. E., et al.: J. Pediat. 38:41, 1951; Idem: Amer. Acad. Pediat., meeting Oct. 16, 1951.

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Medicine

Diaphragmatic Excursion

Relief from dyspnea of pulmonary emphysema may be obtained by placing the patient in a supine head-down position. Tilting reduces the breathing effort by decreasing pulmonary ventilation and increasing diaphragmatic breathing, report Drs. Alvan L. Barach and Gustav J. Beck of Columbia University, New York City. The supine head-down position with the patient tilted between 12 and 20° is comparable in some respects to increasing the resting level of the diaphragm by abdominal belts or pneumoperitoneum. With increase in diaphragmatic excursion from the weight of the abdominal organs, oxygen absorption and carbon dioxide elimination are facilitated and use of the upper intercostal and accessory neck muscles of respiration is abandoned. Pulmonary ventilation with 100% oxygen instead of air measured for a group of 24 patients decreased an average of 22% in the tilted position but only 15% in the sitting position. Concomitant with an average decrease of 26% in pulmonary ventilation in 10 patients with pulmonary emphysema tilted in the head-down position for forty-five minutes, arterial oxygen increased in 6, remained unchanged in 3, and decreased 1.6 volumes per cent in 1 patient with associated cardiac insufficiency. Blood carbon dioxide tension and *p*H changed little in 7 of the 10 patients. However, 2 patients showed a rise in carbon dioxide tension of 4 and 5 mm. of mercury with a fall in *p*H from 7.43 to 7.39 and from 7.5 to 7.45. In 1 patient with an associated respiratory acidosis the *p*H rose from 7.27 to 7.44. The increased efficiency in the alveolar ventilation of the lower lobes by induced diaphragmatic breathing as compared to costal breathing was revealed in 8 of 10 subjects. The 3 patients with unchanged arterial saturation appeared to be adapted to an accustomed degree of anoxia which permitted the decrease in pulmonary ventilation and the consequent relief from dyspnea.

Am. J. Med. 16:55-60. 1954.

Metabolism

Effects of Cardiac Hypoxia

Adequate cardiac oxygenation is maintained in dogs during varying degrees of oxygen depletion by increased coronary flow and myocardial oxygen extraction. The administration of 10% oxygen to intact animals maintains left ventricular oxygen consumption and only slightly changes cardiac carbohydrate uptake, report Dr. Donald B. Hackel and associates of Western Reserve University, Cleveland, and the Peter Bent Brigham Hospital and Harvard University, Boston. Administration of 5% oxygen increases the arterial levels of lactate and pyruvate and decreases the arteriovenous differences and coefficients of pyruvate, lactate, and glucose extraction. However, the total utilization of these substances is maintained. Complete anoxia results in negative arteriovenous differences for lactate and decreased or negative values for pyruvate.

Circulation Research 2:169-174, 1954.

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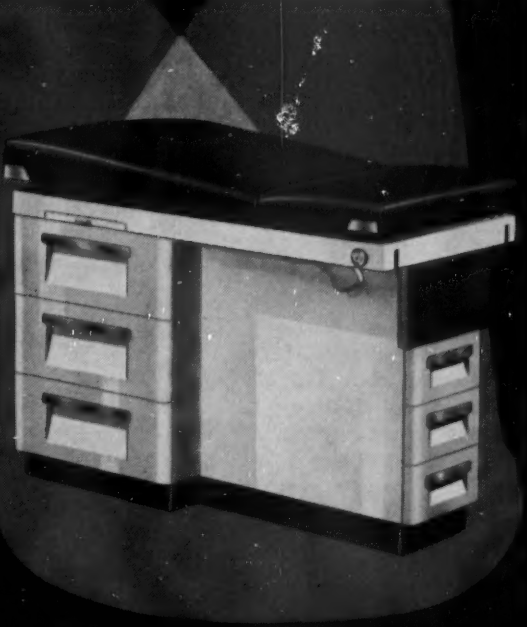
Properly contoured two-piece top padded with foam rubber, covered with acid-resistant plastic.



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BASIC SCIENCE *Briefs*

Cortisone

Blood Basophil Depletion

The number of circulating basophils in human blood is reduced after the administration of cortisone. Although the degree of reduction is less for basophils than for eosinophils, the decline and recovery in the numbers of the 2 cell types are parallel, report Dr. Charles F. Code and associates of the Mayo Clinic, Rochester, Minn. The numerical relationship observed in the cortisone-induced eosinopenia and basopenia may reflect a physiologic relationship between basophils and eosinophils.

Proc. Staff Meet., Mayo Clin. 29:200-204, 1954.

Pathology

Purified Intrinsic Factor

Isolation of Castle's intrinsic factor appears to be possible without preliminary electrophoresis of hog gastric mucosal concentrates. Dr. A. L. Latner of the Royal Victoria Infirmary, at Newcastle-upon-Tyne, and associates report that utilization of varying *p*H and some salt solutions permitted isolation of a mucoprotein with the properties of the intrinsic factor. When administered with radioactive vitamin B_{12}, the fraction diminished fecal excretion of the radioactive material, indicating intrinsic factor activity. The agent is similar to fractions obtained by electrophoresis and is 15 times more active than extracts from ammonium sulfate precipitations. Chemical analysis, electrophoretic pattern, and biologic activity suggest that the material is a mucoprotein in a pure state.

Lancet 266:497-498, 1954.

Physiology

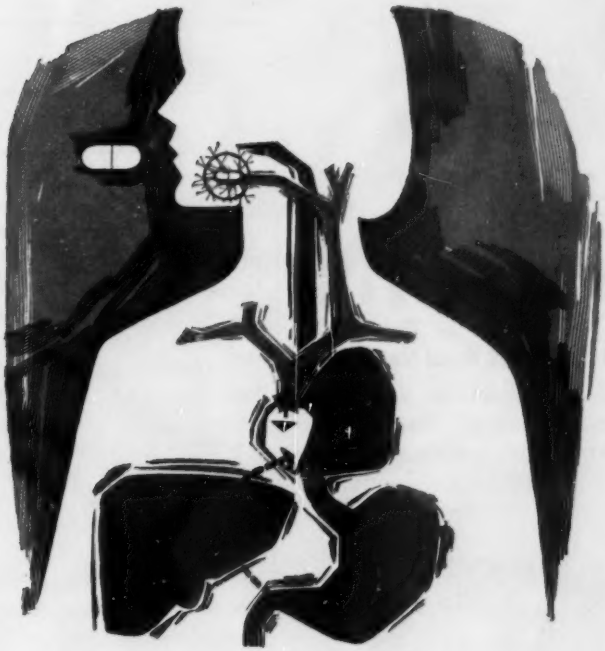
Induction of Hepatomas

Increased incidence of hepatomas in mice results from the ingestion of some fractions of fat. Crisco, dissolved in diethyl ether and cooled at various temperatures, yielded 5 crude fractions with different carcinogenic properties, report Dr. Oleg Jardetzky and associates of the University of Minnesota, Minneapolis. Unfractionated and fractionated fat was incorporated into the diets of 6 groups of mice. Hepatomas were induced in 40% of animals fed unfractionated fat, 15% of those fed fraction I, 25% of those receiving fraction III, 45% of those fed fraction IV, and 65% of those receiving fraction V. Fraction II appeared to be innocuous, since no tumors developed in animals fed this compound.

Proc. Am. A. Cancer Research 1:22-23, 1954.

The shortest route in oral androgen therapy—

by-passing the liver



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Metandren Linguets also provide — economy for the patient • convenience for doctor and patient • freedom from fear of injection • easily adjusted, uniform dosages.

Metandren Linguets are supplied in tablets of 5 mg. (white, scored) and 10 mg. (yellow, scored); bottles of 30, 100 and 500.

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1. ESCAMILLA, R. F., AND GORDON, G. S.: J. CLIN. ENDOCRINOL. 10:248 (FEB.) 1950.

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Short Reports from ABROAD

SWITZERLAND

Therapy for Toxemia. Protoveratrine may reduce blood pressure levels associated with toxemia of pregnancy. Other signs and symptoms of eclampsia or preeclampsia disappear simultaneously.

Dr. O. Käser of St. Gallen used the alkaloid for 100 patients with late toxemias. Intravenous administration was successful for 24 of 25 patients, intramuscular administration for 47 of 53, and oral administration for 24 of 40. None of the mothers died; infant mortality was 6.9%.

Side effects of protoveratrine are moderate. Treatment was discontinued because of severe vomiting in only 1 instance.

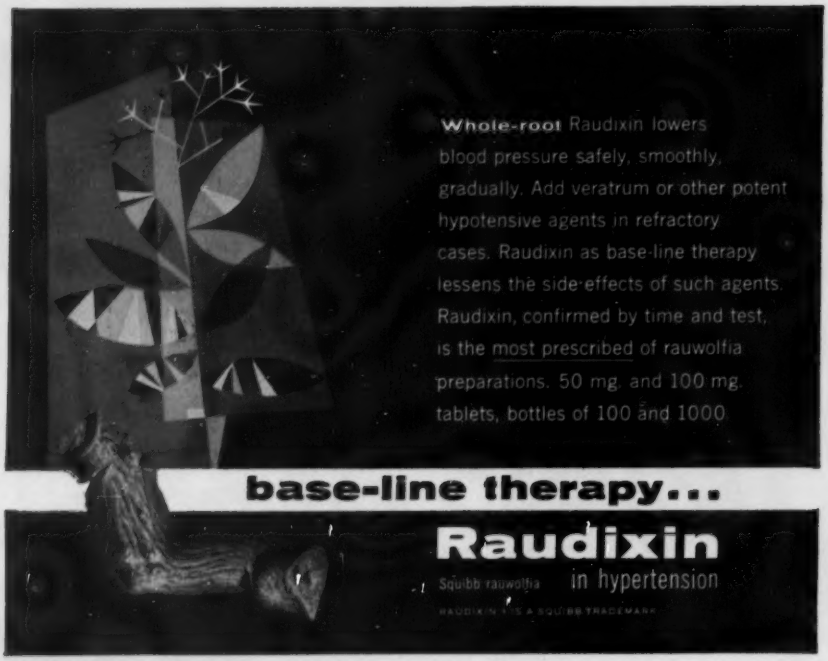
Schweiz. med. Wchnschr. 84:171-180, 1954.

2

Potassium Retention and Tetany. Increased blood potassium levels may predispose or even provoke convulsions in children.

Drs. G. Fanconi and Th. Neuhaus of the University of Zürich state that although uremic acidosis usually makes the child stuporous, convulsions may be seen during acute glomerulonephritis. The convulsions are a result of hyperpotassemia caused by poorly functioning kidneys.

In newborn infants, tetany due to hypofunction of the parathy-



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dilates both arterioles and capillaries

WHITTIER LABORATORIES
919 N. Michigan Ave., Chicago 11, Illinois

roids, combined with inadequate kidney function, apparently increases serum phosphorus and the potassium-calcium ratio.

Improper management of dehydration in infants, including administration of potassium salts, increases the incidence of convulsions. In older children with unstable autonomic nervous systems and normocalcemic tetany, a moderate increase in the serum potassium level is frequent.

Helvet. paediat. acta 8:424-450, 1953.

3

Phlebitis Therapy during Pregnancy. Patients with preexisting varicosities are often susceptible to postpartum thromboembolic sequelae. Drs. A. Hauser and K. Sigg of the University of Basel therefore recommend that active treatment of the varicose veins be carried out during pregnancy.

Management consists of injection of the varices and prevention of ankle edema by application of elastic bandages.

Of 200 pregnant patients with varicose veins so treated, 10 had thrombophlebitis in contrast to 63 of 200 untreated controls. Thrombophlebitis also tended to be more severe in the control series.

Schweiz. med. Wchnschr. 84:13-14, 1954.

4

Exchange Transfusions in Infants. Kernicterus and focal liver necrosis occur when the amount of blood used for exchange transfusion in the newborn is inadequate to insure successful removal of circulating antibodies.

Dr. H. Zwirn of the Children's Hospital, Basel, found in a study of

(Continued on page 161)

they've heard the call for

VI-DAYLIN®

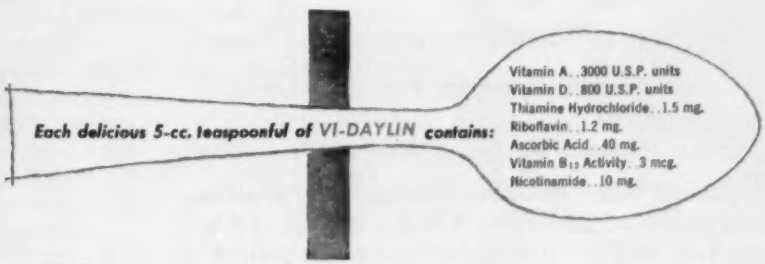
(HOMOGENIZED MIXTURE OF VITAMINS A, D, B_1, B_2, B_{12}, C AND NICOTINAMIDE, ABBOTT)

Grandpa too? Sure! VI-DAYLIN's a taste-treat at any age. It's all lemon-candy, golden-honey goodness—from the first suspicious sip to the last delicious lick. And each spoonful holds a full day's supply of *seven* important vitamins, including body-building B_{12}.

VI-DAYLIN needs no pre-mixing, no droppers, no refrigeration. Mother can pour it as is—serve it with milk, cereals or juices—and store it where she wishes.

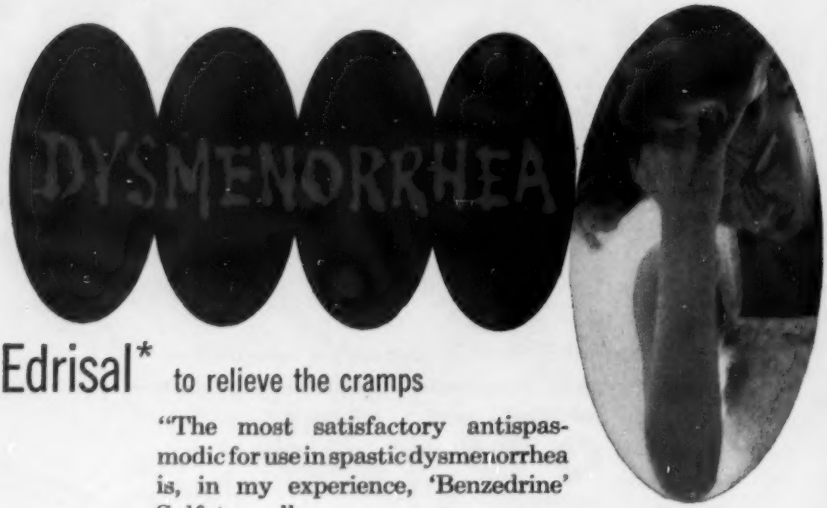
For kids—and for grownups who dislike tablets or capsules—you'll find VI-DAYLIN tops among liquid multivitamins. Prescribe it in the economical pint-size bottle—there's more than enough for the next three months.

Abbott



407151

For the pain, depression and cramps of



Edrisal* to relieve the cramps

"The most satisfactory antispasmodic for use in spastic dysmenorrhea is, in my experience, 'Benzedrine' Sulfate . . ."

Janney, J.C.: Medical Gynecology, ed. 2, Philadelphia, W.B. Saunders Co., 1950, p. 365.

'Edrisal' to relieve the pain

"'Edrisal' was more effective than any other analgesic previously used..."

Wells, R.L.: M. Ann. District of Columbia 20:360, 1951.

'Edrisal' to relieve the depression

"Mental depression was always relieved."

Hindes, H.J.: Indust. Med. 15:262.

Each 'Edrisal' tablet contains: Benzedrine* Sulfate (racemic amphetamine sulfate, S.K.F.), 2½ mg.; acetylsalicylic acid, 2½ gr. (0.16 Gm.); and phenacetin, 2½ gr. (0.16 Gm.).

Recommended dose: 2 tablets.

Smith, Kline & French Laboratories, Philadelphia *T.M. Reg. U.S. Pat. Off.

31 infants with erythroblastosis fetalis that exchange transfusions with less than 700 cc. of blood frequently failed to remove Rh-positive red cells and Rh antibodies. In 21% of the patients bilirubinemia was not decreased.

Ann. paediat. 181:343-352, 1953.

5

Tromexan in Human Milk. Excretion of Tromexan and other dicumarol derivatives in mother's milk may have a deleterious effect on nursing infants. Since the agents are usually administered during a period when the prothrombin level of the newborn child is reduced, further lowering of the index as a result of Tromexan may cause hepatic damage.

Dr. M. A. Christ of the University of Basel observed severe liver damage in 2 infants who were nursed by Tromexan-treated mothers. The drug was detected in the milk by spectrophotometry.

Gynaecologia 137:32-50, 1954.

FRANCE

Hypertrophy of the Verumontanum. Enuresis in young boys may sometimes be a result of hypertrophy of the colliculus seminalis, or verumontanum. The syndrome usually consists of longstanding bedwetting with pollakiuria, dysuria, and hesitancy. Occasionally cystitis with pyuria or hematuria may be associated.

Dr. G. Lauret of Paris states that diagnosis can easily be made by cystoscopic and urethroscopic examinations performed under general anesthesia. The verumontanum is cauterized if enlarged. Of 9 boys

between 2 and 12 years of age with intractable enuresis cured after cauterization, 7 had congenital hypertrophy of the verumontanum. In 2, hypertrophy resulted from inflammation.

Arch. franç. pédiat. 11:97-100, 1954.

ITALY

Demonstration of Acid-fast Bacilli. Detection of tubercle bacilli in cerebrospinal fluid smears is frequently time-consuming and uncertain. Drs. Tatiana Copaitich and Giorgio Andreoni of the University of Rome have devised a simple electrophoretic technic for determining the concentration of bacilli.

An electrical current of 9 volts is applied across the cerebrospinal fluid sample for fifteen minutes. The fluid around the cathode is then collected, fixed, and stained. Microscopic examination usually will reveal both polymorphs and acid-fast bacilli.

Acid-fast bacilli were demonstrated in 11 of 12 patients with tuberculous meningitis; other microscopic methods showed the bacilli in only 7.

Aggiorn. Pediatrico 4:857-864, 1953.

2

Bone Marrow Disease. Hemocytoblasts are predominant in the bone marrow during acute leukemia. According to Drs. Giovanni Astaldi

Improved stability in parkinsonism therapy

Orally administered Parsidol has produced favorable responses in 60-80% of patients with widely varying parkinsonian symptomatology.[1] Either alone or in combination with adjunctive therapy, Parsidol is effective in controlling symptoms of parkinsonism such as akinesia, tremor, spasm, festination, sialorrhea, oculogyric crises and extrapyramidal hypertonicity.[2]

Parsidol alone has demonstrated its clinical superiority over comparable agents.[2] When combined or rotated with such drugs as atropine and dextroamphetamine, Parsidol's effectiveness may be increased, widening its usefulness and lending greater stability to therapy.[3]

Available in 10 mg. and 50 mg. tablets in bottles of 100 and 500. Trial supplies and complete information on Parsidol will be sent promptly when requested.

1. Gallagher, D. J. A., and Palmer, H.: New Zealand M. J. 49:531 (Oct.) 1950.
2. Sigwald, J.: Presse méd. 59:819 (Sept. 17) 1949.
3. Timberlake, W. H., and Schwab, R. S.: New England J. Med. 247:98 (July 17) 1952.

PARSIDOL®

HYDROCHLORIDE

Brand of N-(2-diethylaminopropyl)phenothiazine hydrochloride

WARNER-CHILCOTT *Laboratories* NEW YORK

and Carlo Mauri of the universities of Pavia and Modena, this predominance is not caused by the unusually large number of the cells but by the incapability of differentiation.

Experiments with colchicine suggest that the rate of mitosis is extremely slow and that the marrow contains a large portion of aged cells that ordinarily would have differentiated into forms of greater maturity.

Thus, to avoid further aggravation, exchange transfusions and antibiotics are preferred to antimitotic agents for the treatment of acute leukemia.

Rev. belge path. et méd. expér. 23:69-83, 1953.

AUSTRIA

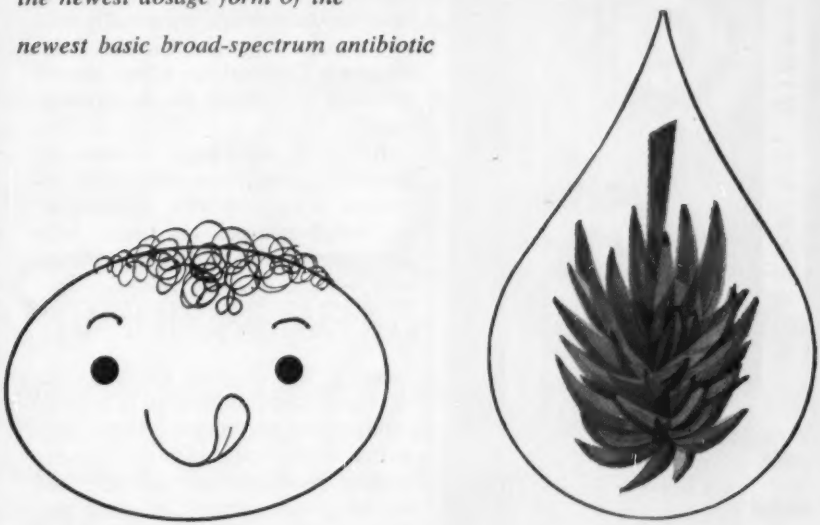
Childhood and Adolescent Epilepsy. Failures in the medical management of epilepsy among children and adolescents may be a result of insufficient medication, too little flexibility in dosage and the combining of medications, or excessive initial dosages. Often a year of experimentation is required before the best combination of drugs and dosages is found.

Although management based entirely on psychotherapy is not suitable, Drs. W. Spiel and H. Strotzka of the University of Vienna believe that the psychic factors must always be considered. Almost all pa-

FOR YOUR **YOUNGEST** PATIENTS...

the newest dosage form of the

newest basic broad-spectrum antibiotic



Tetracyn

brand of tetracycline

PEDIATRIC DROPS

(BANANA FLAVORED)

Now infants and young children can receive the basic benefits of TETRACYN with the basic ease of pediatric drop administration. TETRACYN is well tolerated in all its dosage forms.

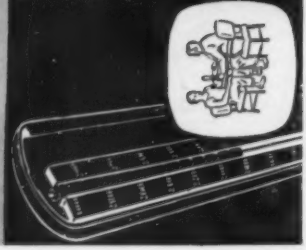
"Clinically, tetracycline was tried on 25 infants and children (ages 6 weeks to 8 years) with a variety of microbial infections, including pneumonia, upper respiratory infections, conjunctivitis, gastroenteritis, diarrhea, and gangrenous appendicitis. Twenty-three of them were definitely improved with restoration of normal temperature in one to three days."*

SUPPLIED: Tetracyn Pediatric Drops *(banana flavored)* 1.0 Gm. in 10 cc. bottle, 100 mg. tetracycline (amphoteric) per cc., with special dropper calibrated at 25 mg. and 50 mg.

ALSO AVAILABLE: Tetracyn Tablets *(hydrochloride) (sugar coated)* 250 mg., 100 mg. and 50 mg.
Tetracyn Oral Suspension *(chocolate flavored)* Bottles of 1.5 Gm.
Tetracyn Intravenous *(hydrochloride)* Vials of 250 mg. and 500 mg.
Tetracyn Ointment *(hydrochloride) (topical)* 30 mg./gram, in ½ oz. and 1 oz. tubes.
Tetracyn Ophthalmic Ointment *(hydrochloride)* 5 mg./gram, in ⅛ oz. tubes.

**Lawler, E. G. et al.: Clin. Med. 61:207 (March) 1954.*

BASIC ETHICAL PHARMACEUTICALS — ROERIG Rx — 536 LAKE SHORE DRIVE, CHICAGO 11, ILLINOIS



tients hypersensitive to the hydantoins or oxazolidines exhibit some definite neurotic signs. However, because these drugs are usually better therapeutic agents than bromides or Luminal, an effort should be made to combat the hypersensitivity.

Reducing emotional tensions by means of psychotherapy often increases drug tolerance substantially. Antihistamines also may help the patient tolerate the drugs.

Arch. Psychiat. 192:34-46, 1954.

2

Surgery for Angina Pectoris. Severe attacks of anginal pain may be relieved by disruption of the periaortic sympathetic plexus. The operation consists of splitting the sternum and painting the periaortic plexus with 6% phenol under direct visual control.

Dr. F. Demmer of Vienna had no operative mortalities in 11 patients, despite grave preoperative conditions. In all but 1 patient anginal attacks ceased immediately after operation. Subjective improvement was excellent and exercise tolerance was increased. Most of the patients were able to return to work.

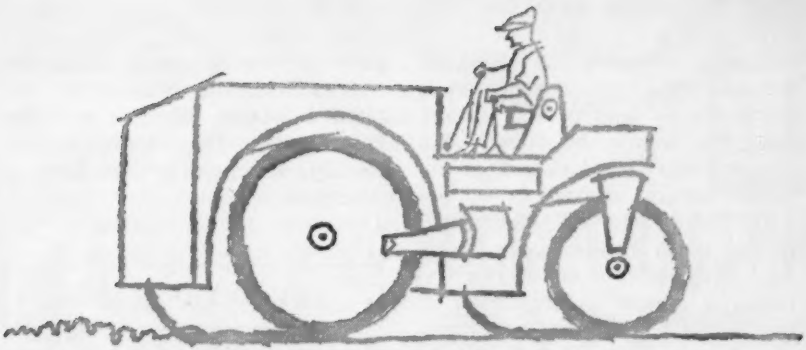
During a three-year observation period, 5 of the patients died.

Wien. med. Wchnschr. 103:952, 1953.

SPAIN

Tuberculosis of the Cervix. Involvement of the cervix in tuberculosis of the female genitals is not infrequent, according to Dr. Francisco Nogales of the University of Madrid.

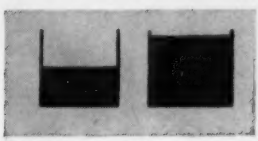
A descending infection from the



TWO BULKING AGENTS make the difference!

Maximum laxative effect is obtained with Plancello Tablets because they are composed of not one but two bulking agents — Plantago loeflingii and methylcellulose.

This means smaller dosage . . . better patient acceptance — greater economy. Only six tablets daily is the required starting dosage which may be gradually diminished as normal physiologic function returns.



On a gram for gram basis, "Plancello" Tablets form 54% more bulk than equivalent amounts of methylcellulose alone.

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TABLETS

PROFESSIONAL TRIAL SUPPLY AVAILABLE ON REQUEST.

Dosage: only 2 tablets after each meal (6 tablets daily) to be followed by one or preferably 2 glasses of water.

Supplied: 9.0 gr. tablets in bottles of 50 and 500.

AMERICAN FERMENT CO., Inc., 1450 Broadway, New York 18, N. Y.

uterus is ordinarily the origin of the infection. Although spread is ordinarily by way of the submucosa, bacilli may be directly implanted into the damaged or inflamed cervical mucosa.

Of 244 patients with tuberculosis of the uterus 46 also had tuberculous cervicitis. The endocervix was involved almost as frequently as the portio vaginalis. The patients were between 19 and 37 years old. Almost all were sterile; 40 had uterine hypoplasia.

Leukorrhea and metrorrhagia are usually the presenting symptoms. Definite diagnosis can be best made by microscopic examination of cervical biopsies.

The treatment is medical. Streptomycin and isoniazid, which are administered intramuscularly and applied locally, seem to give the best results. The cervical lesions usually disappear within fifty to ninety days.

Arch. Gynäk. 184:139-158, 1953.

THE NETHERLANDS

Grafting of Cultured Tissue. Organ replacement in humans may be achieved by grafting embryonic tissues into adults.

Dr. P. J. Gaillard of Leiden finds that homografts survive and become integral parts of the host organism only when [1] no important chemical differences exist between

the transplant and the host organism, and [2] the reaction of the host organism is negligible.

In higher vertebrates, chemical individuality is poorly developed during most of the embryonic life; therefore, transplants of embryonic tissues into adults are most likely to be successful.

Complete functional replacement was achieved in 7 of 27 patients when parathyroid gland tissue taken from newborn infants was transplanted.

Integration was accomplished only in patients between 16 and 36 years of age. The operation failed in all older patients.

To change or reduce the antigenic pattern, the donor tissue is cultured for ten to fifteen days in plasma and serum of the future host.

J. internat. chir. 13:423-427, 1953.

Patients . . . I have met

• *The editors will pay $1 for each story published. No contributions will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.*

Requital

"Why did your husband give you a black eye?" I asked my patient.

"He got out of jail on his birthday," the woman answered, "and I wished him many happy returns."—B.P.S.

Oddity

My colleague says a psychologist is a man who watches everybody else when a good-looking girl enters the room.—E.K.

Resourceful

As a psychiatrist at an army hospital, I observed a soldier who had been hospitalized for rest after front-line duty. When I pronounced his mental condition satisfactory, he remarked, "I ought to run for Congress. I'd be the only politician in the world with papers to prove I'm not crazy."—S.L.

recommended particularly for the

HYPERTENSIVE

who can and must "STAY ON THE JOB"

Maxitate with RAUWOLFIA

BENEFITS IN MILD TO SEVERE HYPERTENSION

- **hypotensive effect**—gradual, safe, distinctive.
- **pulse rate is slowed,** easing strain on heart.
- **symptomatic improvement**—often dramatic.
- **tranquility** without drowsiness.
- **well tolerated** for months.
- **dosage** requires no critical adjustment.
- **postural hypotension** not induced.
- **protection against vascular traumatic accidents.**

EACH TABLET CONTAINS:

*Rauwolfia ..... 30 mg.
Rutin ..... 30 mg.
Rauwolfia (whole root) ... 30 mg.

Average Dosage: 2 tablets 3 times daily
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Freedom of Choice

When my patients ask if an appendectomy scar would show, I answer, "That is entirely up to you."—S.L.

Scribblers

When the schoolteacher criticized my son's poor penmanship, my son replied, "Don't worry about me. I'm going to be a doctor like my dad."—L.H.

Ammunition

I am a receptionist for a doctor and a dentist, both young bachelors. When the dentist went on his vacation, he left an apple on my desk for every day he was to be gone.—L.L.B.

Patient Provider

My dinner companion remarked, "I find lobster salad very hard to digest. Do you like it, Doctor?"

"I not only like lobster," I answered, "I'm grateful to it!"—S.L.

A psychiatric patient who was vacationing sent me a card saying, "Having a wonderful time. Wish you were here to tell me why."—L.B.

Precious Possession

Another doctor and I were discussing a legal case and I remarked, "It seems excessive to me for this woman to get $5,000 for the loss of a thumb."

"Perhaps," replied my colleague, "it was the one she kept her husband under."—B.P.S.

new 3 year study[1] shows

"beneficial effect" of

DESITIN®

OINTMENT

the pioneer external **cod liver oil** therapy

in **extensive dermatitis, diaper rash, severe intertrigo, chafing, irritation** (due to diarrhea, urine, soaked diapers, etc.)

DESITIN OINTMENT achieved "significant amelioration" or practically normal skin in 96¾% of infants and children suffering intense edema, excoriation, blistering, maceration, fissuring, etc. of contact dermatitis. This and other recent studies recommend Desitin Ointment as "safe, harmless, soothing, relatively antibacterial"..... protective, drying and healing.[2-4]

Desitin Ointment is a non-irritant, non-sensitizing blend of high grade, crude Norwegian cod liver oil (with its high potency vitamins A and D, to benefit local metabolism,[1] and unsaturated fatty acids in proper ratio for maximum efficacy), zinc oxide, talcum, petrolatum, and lanolin. Does not liquefy at body temperature and is not decomposed or washed away by secretions, exudate, urine or excrements. Dressings easily applied and painlessly removed. Tubes of 1 oz., 2 oz., 4 oz.; 1 lb. jars.

samples and reprint[1] available from

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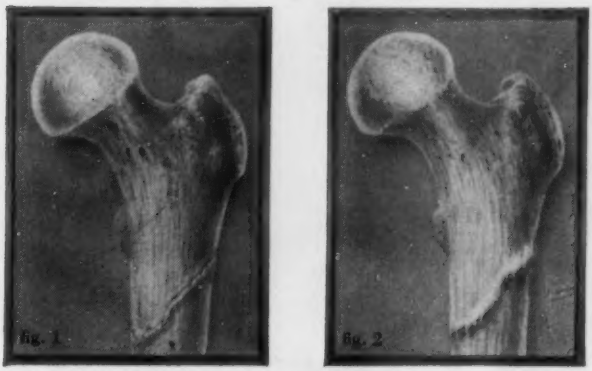
70 Ship Street • Providence 2, R. I.

1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Levitikus, R.: Ind. Med. & Surgery. 18:512, 1949.
4. Turell, R.: New York St. J. M. 50:2282, 1950.

INDEX TO ADVERTISERS

AGING CHANGES THE BONE PICTURE



Femur, fracture, oblique, upper third.

Healing of fractures is often delayed in the aging patient because impaired osteoblastic activity due to declining sex hormone function causes the bone matrix to atrophy. Note incomplete union of fracture (fig. 1) in patient with postmenopausal osteoporosis, in contrast with normal union (fig. 2) when a proper ratio exists between osteoblastic and osteoclastic activity.

According to Reifenstein, some degree of osteoporosis is almost "physiologic" after menopause, and clinical osteoporosis may be found in about 10 per cent of women over 50 years of age. With combined estrogen-androgen therapy given over extended periods, the prognosis for bone recalcification is good. This investigator also points out that "older women with fractures, particularly of the hip, respond especially well."*

Combining both estrogen and androgen, "Premarin" with Methyltestosterone provides a dual approach for maximum efficiency in treating osteoporosis. A brochure outlining full details of therapy is available at your request.

*Reifenstein, E. C., Jr., in Harrison, T. R.: Principles of Internal Medicine, Philadelphia, The Blakiston Company, 1950, p. 655.

"Premarin" with Methyltestosterone is supplied in two potencies: the *yellow* tablet (No. 879) contains 1.25 mg. of conjugated estrogens equine and 10 mg. of methyltestosterone; the *red* tablet (No. 878) contains 0.625 mg. and 5 mg. respectively. Both potencies are available in bottles of 100 and 1,000 tablets.

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"PREMARIN" with METHYLTESTOSTERONE

for combined estrogen-androgen therapy

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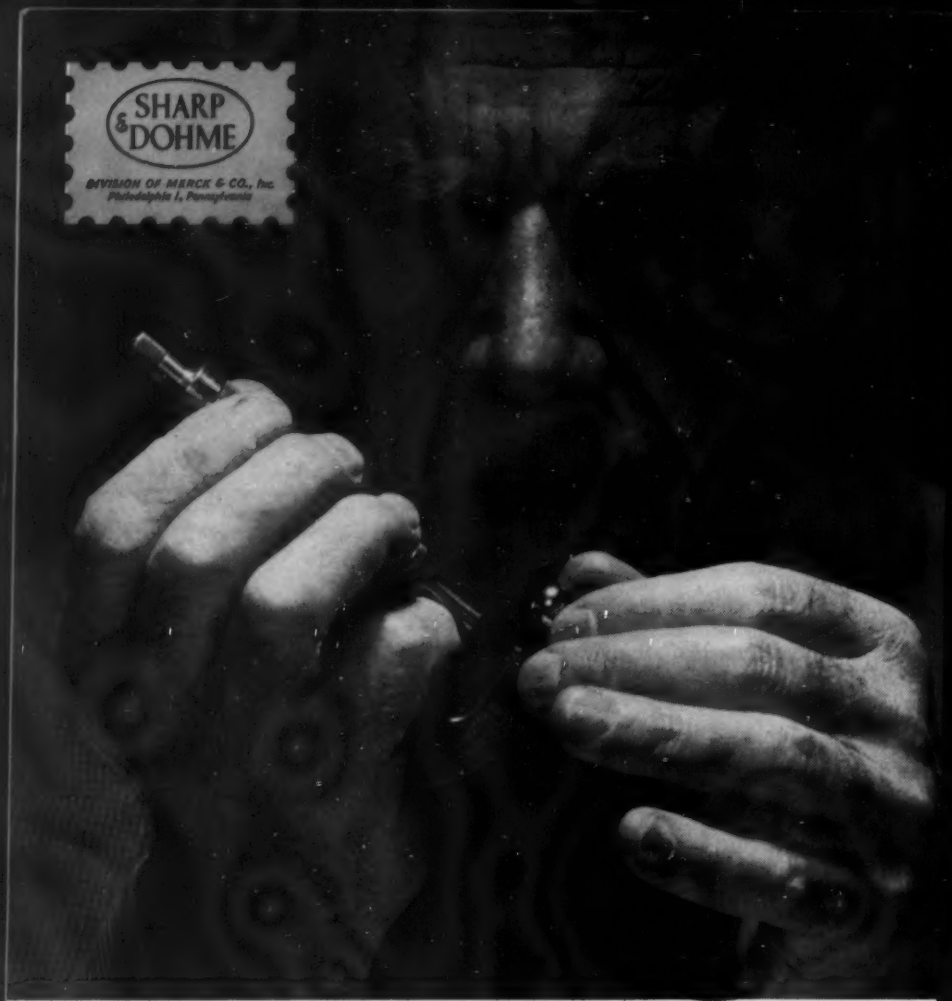

PHOTOGRAPH BY CHARLES KERLEE

Pernicious anemia patient "happy to work again"*

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CRYSTALLINE VITAMIN B_{12}

His job required precision. Vitamin B_{12} remitted the disabling symptoms of pernicious anemia, put him back at work.*

Small doses of Vitamin B_{12} produce the same response in pernicious anemia as injections of potent liver extracts.

Vitamin B_{12} is also valuable in other types of anemia, in tropical and nontropical sprue, in trigeminal neuralgia.

Quick Information: REDISOL supplies vitamin B_{12} in a complete range of dosage forms. REDISOL *Tablets,* 25 and 50 mcg. REDISOL *Injectable,* 30 and 100 mcg. per cc. in 10 cc. vials—also 1,000 mcg. per cc. in 1 cc. vials. *Elixir,* 5 mcg. per 5 cc. in pint SPASAVER® and gallon bottles.

*From a case report: J.A.M.A. 153:191, 1953.

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— gives a zestful "salty" flavor to the sodium-restricted diet — helps to keep the patient on the salt-free regimen by making meals tasty.

Neocurtasal may be used wherever sodium restriction is indicated — it is completely sodium-free. May be used like ordinary table salt — added to foods during or before cooking or used to season foods at the table.

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"... trustworthy non-sodium containing salt substitute"[1]

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Write for pad of diet sheets.

1. Heller, E. M.: The Treatment of Essential Hypertension. *Canad. Med. Assn. Jour.*, 61:293, Sept., 1949.

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